

LEATH & ROSS'S HOMŒOPATHIC PHARMACIES,

9 VERE STREET, W.,

And 5 ST. PAUL'S CHURCHYARD, E.C.,
LONDON.

Those desirous of
BECOMING AGENTS
are requested

ESTABLISHED 1835.

To apply at

9 VERE STREET
Wholesale Department.

Our Agents'
GLASS-TOP SHOW CASE,
As it appears open.



TRADE PRICE £4 4s.
CONTENTS REALISE £7 1s. 6d.

THE NEW FAMILY CHEST
Contains 28 Bottles of the most
useful Homœopathic Medicines,
a Guide, giving the treatment of
all common complaints, the uses
of the Medicines, proper doses,
&c. In the lid are the two ex-
ternals most in use, viz., Arnica
and Calendula. It can be fitted
to hold either Pilules or Tinctures.
Price 25/; trade price, 16/8.

Agents for L. & R.'s Medicines
are now established in every
town of any importance in
England, some of the principal
towns in Ireland and Scotland,
several of the British Colonies,
and India and America. Up-
wards of 1,800 persons have
accepted the Agency, and many
have found this branch a profit-
able auxiliary to their other
business.

LEATH & ROSS'S WHOLESALE PRICE LIST OF MEDICINES, ETC., PUT UP READY FOR SALE.

GLOBULES—Medicated any strength up to the 30th potency.
Sixpenny Tubes, 3/- per dozen.
Ninepenny „ 4/6 „
Shilling „ 6/- „

PILULES—Medicated to any strength up to the 30th potency
Sixpenny Bottles, 3/- per dozen.
Ninepenny „ 4/6 „
Shilling „ 6/- „

TINCTURES—Any strength up to the 30th potency.
Sixpenny Bottles, 3/- per dozen.
Ninepenny „ 4/6 „
Shilling „ 6/- „

TRITURATIONS—
Sixpenny Bottles, 4/- per dozen.
Ninepenny „ 4/6 „
Shilling „ 6/- „

EXPORT ORDERS ARE DESPATCHED WITH THE GREATEST PROMPTITUDE.
Special quotations for large quantities.

LEATH & ROSS'S PROPRIETARY ARTICLES.

BERBERINE, 1/1½, 2/9, 4/6 9/6, 22/, 36/.	NEURALINE, 1/1½, 2/9, 4/6 9/6, 22/, 36/.
CHILBLAIN LINIMENT, 1/1½, 2/9 9/6, 22/.	GLYKALINE, 1/1½, 2/9, 4/6 9/6, 22/, 36/.
PHOSPHO-MUR. QUININE, or PICK-ME-UP TINCTURE, 1/1½, 2/9 9/6, 22/.	ODONTALGIC ESSENCE, 1/1½, 2/9, 4/6 9/6, 22/, 36/.
AUROSINE, 1/, 1/6, 2/6 8/, 12/, 20/.	OZONIZED OIL, 1/, 1/6, 2/6 8/, 12/, 20/.
ANTISEPTIC TOOTH TINCTURE, 1/, 1/6, 2/6 8/, 12/, 20/.	HAIR RESTORER, 1/6, 2/6, 4/6 12/, 20/, 36/.

Agents' Counter Cases, £2|2|0, £3|3|0, £4|4|0, £6|6|0, and £10|10|0.

LEATH & ROSS, LONDON.

**MEDALS AWARDED TO
VASELINE.**

BY AMERICAN INSTITUTE.

Bronze Medal, 1874.

Silver Medal, 1875.

Medal of Superiority, 1877.

**SILVER MEDAL,
Exposition Universelle,
Paris, 1878.**

**GRAND MEDAL AND
DIPLOMA,
Philadelphia, 1876.**

CAUTION.

We must again caution the Trade against imitations of "Vaseline," made, apparently, by mixing Paraffin Oil with Paraffin Wax.

Every pharmacist knows that it is impossible to make a satisfactory homogeneous Ointment by mixing with a lard that is "grainy."

The paraffin imitations of Vaseline may be distinguished by their odour, taste, and by the grainy or crystalline structure which is very evident to the eye when compared with the jelly-like smoothness of true Vaseline.

To prevent adulteration, &c., we put it up, for the convenience of the Trade, in 1lb. and 5lb. Tins, with our name stamped thereon; and we beg that it may be ordered in our packages.

VASELINE is the only known substance which possesses ALL the following named qualities, viz. :—

After being liquefied, it regains all its primitive properties on cooling.

It will not crystallise, oxidise, or become rancid, and is absolutely free from odour or taste.

As an emollient it has no rival, as it is the only known substance which will not irritate the skin.

Not being a DISTILLATE of Petroleum, it is perfectly harmless when introduced into the system.

VASELINE is in general use in the Hospitals of England, Europe, and America, and is endorsed by the entire Medical Press and Profession throughout the World as the best basis for ointments, and for use in Ocular Therapeutics, Surgery, Dressing of Wounds, and Obstetrics. In Eczema, Tetter and Ulcerated Surfaces, Rheumatic Swelling of the Joints, Chilblains, and numerous other troubles, it ranks among the most valuable of remedies.

As an emollient, VASELINE is superior to any other substance yet discovered. Its marvellous healing and restoring qualities excel everything else, and it is rapidly taking the place on the toilet table to the exclusion of the various complexion powders, pomades, cosmetics, and other compounds. It will keep the skin clearer, softer, and smoother than any cosmetic ever invented, and will preserve the youthful beauty and freshness of the healthy complexion.

The following articles are put up for Medicinal and Toilet purposes, and will be found superior to anything heretofore introduced :—

NET PRICE LIST.

REGISTERED

- VASELINE (Pure) FOR MEDICINAL USE** } Bottles, in fancy card cases, 3 sizes, 8s., 16s., and 33s. per dozen; in boxes (wood) of 1 dozen and of ½ dozen.
- POMADE VASELINE FOR THE HAIR** }
- CARBOLATED VASELINE** { Vaseline with 3 per cent. Carbolic Acid. Bottles, in fancy card case, 16s. per dozen; in boxes (wood) of ½ dozen, 116 tins, 2s. 6d.
- GERATED VASELINE** In 1-lb. Tins, 2s. 6d.
- VASELINE COLD CREAM** { Glass Pots, 2 sizes, 8s. and 16s. per dozen; in boxes of 1 dozen and of ½ dozen.
- VASELINE CAMPHOR ICE** { Fancy Paper Boxes, 8s. per dozen; in boxes of 1 dozen.
- VASELINE TOILET SOAP** { 9s. per dozen Tablets, less 15% discount; in boxes of 3 tablets.
- VETERINARY VASELINE** 1-lb. Tins, 24s. per dozen; in boxes of ½ dozen.

For the convenience of Chemists in dispensing, "Vaseline" and "Veterinary Vaseline" are put up in 5-lb. Tins.

The process by which Vaseline is made is protected by Letters Patent, and "Vaseline" is our registered Trade Mark. None genuine except in our Packages.

MANUFACTURED ONLY BY THE

CHESEBROUGH MANUFACTURING CO. (New York),

7 SNOW HILL, AND 41 HOLBORN VIADUCT, LONDON, E.C.

Pronounced by Dr. ATTFIELD, Professor
 of Practical Chemistry to the Pharmaceutical
 Society of Great Britain, to be "of EXTRA-
 PURITY," distinguished for "absence of all im-
 purities, and PRESENCE OF ALL GOOD QUALITIES."
 (CERTIFICATE attached to each Invoice.)

The
 Best
 and
 Cheapest

NET CASH PRICES—CARRIAGE PAID.
 One Barrel, carriage paid, 6/- per gallon.
 Two Barrels, carriage paid, 5/6 per gallon.
 Five Barrels, carriage paid, 5/6 per gallon.

Superior Steam-Refined

NORWEGIAN COD LIVER OIL.

MAWSON & SWAN, Importers, 11 & 15 Mosley St., NEWCASTLE-ON-TYNE.

NOTA BENE.—ABOVE-MENTIONED CORRECTED QUOTATIONS APPLY ONLY FOR
 ORDERS RECEIVED DURING PRESENT MONTH (DECEMBER).

MALTINE

(EXTRACT OF MALTED BARLEY, WHEAT, AND OATS).

The ORIGINAL and ONLY Preparation composed of these Three Cereals.

MALTINE is a highly concentrated extract of malted *Barley*, malted *Wheat*, and malted *Oats*, containing undiminished and unimpaired, all the nutritious principles that can be extracted from these cereals. By the most carefully conducted scientific process we are enabled to offer a perfect article, possessing *five to ten times* the beneficial and nutritive merit of any alcoholic or fermented Extract of Malt.

From The CHEMIST AND DRUGGIST.

This preparation differs from others of a similar class by being not an extract of barley malt only, but an extract of malted *barley*, *wheat*, and *oats*. Thus, it is claimed, the elements necessary to life are presented in their most perfect form. The 'Maltine' is also produced *in vacuo* at a temperature of not more than 120° Fahr., a distinct advantage when albuminous substances have to be treated."

We manufacture the following Preparations, the Formulas and Doses of which are printed on the Labels attached to each Bottle.

- MALTINE.
- MALTINE with Cod-Liver Oil.
- MALTINE with Cod-Liver Oil and Pancreatine.
- MALTINE with Cod-Liver Oil and Phosphates.
- MALTINE with Hypophosphites.
- MALTO-YERBINE.
- MALTINE with Pepsine and Pancreatine.
- MALTINE WINE with Pepsine and Pancreatine.

- MALTINE WINE.
- MALTINE with Alteratives.
- MALTINE Ferrated.
- MALTINE with Beef and Iron.
- MALTINE with Phos. Iron, Quinia and Strychnia.
- MALTINE with Phosphates, Iron and Quinia.
- MALTINE with Phosphates.

MALTINE and COMPOUNDS, in bottles containing 8 and 16 fluid ounces, equal to 12 and 24 ounces by weight, 2/9 and 4/6. The Compounds, 3/6 and 6/6. Also Winchester Quarts, 120 ounces by weight, 20/- and 29/-.

CAUTION.—Owing to *spurious attempts at imitation*, examine each Bottle, and see that the Capsule is marked—"THE MALTINE MANUFACTURING COMPANY, LIMITED," none is genuine without this.

The MALTINE MANUFACTURING COMPANY (Limited),
 GT. RUSSELL STREET BUILDINGS (corner of Gt. Russell and Charlotte Streets), LONDON.

BY HER
MAJESTY'S



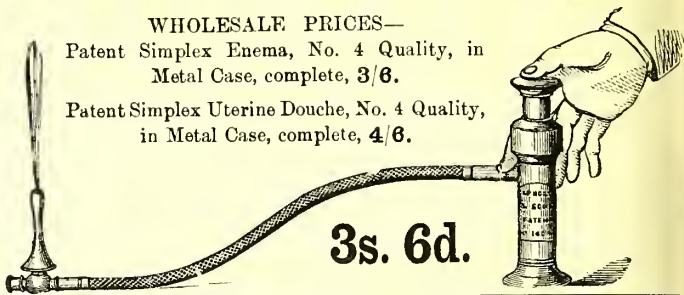
ROYAL
LETTERS PATENT

ARNOLD & SONS' "SIMPLEX" ENEMA.

NOTICE.—ARNOLD & SONS, at the suggestion of several leading members of the Profession, have introduced a cheap form of their Patent "Simplex" Enema, which will be found to supersede all other Enemas. It is acknowledged to be the most simple, durable, and effective instrument yet introduced.

Vide *The Lancet*, August 17, 1872; *British Medical Journal*, June 22, 1872; *Medical Times and Gazette*, June 22, 1872; *Medical Press and Circular*, June 26, 1872.

WHOLESALE PRICES—
Patent Simplex Enema, No. 4 Quality, in Metal Case, complete, 3/6.
Patent Simplex Uterine Douche, No. 4 Quality, in Metal Case, complete, 4/6.



3s. 6d.

THE VAPORIFER.

5s. & 7s. 6d.



ARNOLD & SONS' PATENT VAPORIFER BRONCHITIS KETTLE, INHALER, AND VAPOUR BATH COMBINED.

As suggested by W. L. SHEPARD, M.R.C.S., etc.

Vide *The Lancet*, Jan. 11, 1879; *British Medical Journal*, Feb. 8, 1879; *Medical Times and Gazette*, April 12, 1879

Extract of Letter received from J. F. FINCHETTE, Esq., Portland House, Brunswick Square, W., dated Feb. 18, 1879. "The 'Vaporifer,' all complete, came to hand safely on Saturday last, with thanks, and I consider it a marvel of cheapness and utility, and wish DR. SHEPARD, all success with his invention, which, I feel assured, only needs to be known to be appreciated. I have tried it for each of the purposes for which it is intended, and found it answer completely."

Trade Price, 42s. per doz. Retail Price, 5s. With Lamp, Saucepan, and Stand complete, 63s. per doz. Retail Price, 7s. 6d.

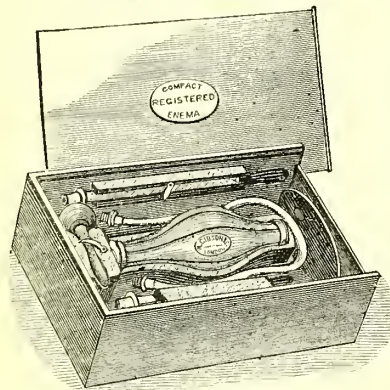
SOLE MANUFACTURERS AND PATENTEES—

ARNOLD & SONS, Instrument Makers,
By Appointment to Her Majesty's Government, St. Bartholomew's Hospital, and the Principal Provincial and Colonial Hospitals, &c.
35 & 36 WEST SMITHFIELD, LONDON, E.C.

W. GIBSON & CO.'S "COMPACT" ENEMA.

In Cedar Box with Sliding Lid.

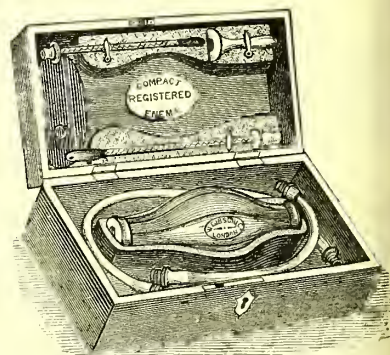
In Polished Mahogany Box.



Outside measurement 7 by 4 1/4 by 2 1/2.

FIG. 1.

The "COMPACT" Enema is so constructed that the India Rubber tubes disconnect from the centre, and are placed in the Case so that they cannot possibly become perished; and the pipes, which all fit one screw, viz., a highly finished bone rectum pipe, an elastic-gum rectum pipe with metal shield for children, and an elastic-gum vagina pipe and leather shield, have each their separate location in the Case, where they are fastened by a brass thumb-piece. None but the very best Mineralised India Rubber is used in the manufacture of the "COMPACT" Enema, the enamel of which is warranted not to blister or peel off, or the centres to split; they cannot therefore be surrised for exportation to hot climates.



Outside measurement 7 1/4 by 4 1/2 by 2 1/2.

FIG. 2.

PRICES TO THE TRADE.

	PER DOZ.
In Cedar Box (Fig. 1) with Sliding Lid	£2 5 0
In Mahogany Box (Fig. 2) to Fasten with Hooks and Eyes, the bottom of the Box only Velvet Lined	2 15 0
In Mahogany Box (Fig. 2) to Fasten with Hooks and Eyes, Lined throughout with Velvet	2 18 0
In Superior Mahogany Box (Fig. 2) with Lock and Key, and Lined throughout with Superior Velvet	3 9 0

USUAL TERMS.

W. GIBSON & CO.,

Manufacturers of all kinds of Surgical India Rubber Goods, and Dealers in Surgical Instruments and Druggists' Sundries,
75 MORTIMER ROAD, KINGSLAND, LONDON, N.

"CREASOTE SOAP,"

PRIZE MEDAL,

REGISTERED.

PRIZE MEDAL,



LONDON, 1862.



PHILADELPHIA, 1876.

Messrs. LOW, SON & HAYDON

Claim for this Soap that, while it fulfils all the requirements of a good Toilet Soap, it has especial virtues in cases of cutaneous disease and as a preventative against contagion, so that where any risks are incurred (and none are entirely free from them) it becomes a most desirable Soap for the DAILY use of all. It is offered to the public with every confidence in its intrinsic merits, in the belief that it will be duly appreciated, and command an extensive sale. Attention is called to the following Extracts from the Medical Press—

From *The Lancet*, July 19, 1879.—“This Soap contains a large proportion of creasote and other allied substances, and doubtless possesses considerable antiseptic properties; there is therefore a large field for its use.”

From *The Medical Times and Gazette*, September 20, 1879.—“The Soap has a faint (and therefore not displeasing) odour of creasote, is well made, and ought, by virtue of the antiseptic properties of the creasote, to be useful and popular.”

From *The Sanitary Record*, September 15, 1879.—“It is certainly an exceedingly elegant toilet preparation, delicately scented, and neatly got up. As it owes its disinfecting properties to one of the most reliable of known disinfectants, it cannot fail to make its way in public estimation.”

EACH TABLET IS SEPARATELY WRAPPED.
PRICE per dozen, 3/6, or per gross, 36/-.

FAMILY BROWN WINDSOR SOAP.

At 60/- per cwt., Genuine, and sweetly perfumed.

This Soap is recommended to the Trade as the best value that can be obtained. Embossed Squares, 6 to lb., and in 14-lb. Boxes.

CASH DISCOUNT, 10 PER CENT.

R. LOW, SON & HAYDON,

Perfumers, Toilet Soap Makers, and Brush Manufacturers,

330 STRAND (OPPOSITE SOMERSET HOUSE), LONDON.

COBDEN'S QUININE AND PHOSPHORUS PILLS.

THE NEW TONIC, 2/9 and 4/6.

PHOSPHORUS is the life-giving element in the blood, and the thought-giving power of the brain. In conjunction with Quinine it is one of the most powerful curative agents known. All nervous diseases mean a want of Phosphorus in the brain and nerve centres, and to cure them is to reintroduce the deficient property.

COBDEN'S Pills (Quinine & Phosphorus) have been invented to accomplish this end, and there are now many thousands who can testify to the success of this mode of treatment. If your brain is overworked, your nerves unstrung, if you suffer from nervous or general debility, or feel a want of vigour and vitality, try a course of

COBDEN'S Pills (Quinine & Phosphorus). Mr. G. OSBORNE, *Coming Events Office*, Fleet Street, London, writes, October 31, 1877:—"Having taken 'Cobden's Pills' for a short time, I find myself greatly improved in health. They have had a wonderful effect on my nerves."

COBDEN'S Pills (Quinine & Phosphorus). Produce appetite and a healthy digestion. Renew the strength. Renovate the failing power. Remove sensations of fatigue. Produce sensations of exhilaration. Cause no after depression. Increase the capacity for mental and physical exertion. Produce cheerfulness. Give a coolness and dexterity to the mind. Confer freshness, originality, and energy on the mental processes. Produce sensations of increased muscular power. Stimulate the nerve power.

COBDEN'S Pills (Quinine & Phosphorus). Mr. HOWARD PAUL, 271 Strand, London, writes, October 3, 1877:—"I beg to testify to the efficacy of 'Cobden's Pills.' They are an excellent tonic and nerve stimulant, and most useful in relieving the lassitude that frequently follows extra mental or bodily exertion. I have been considerably benefited in my general health by their use, and recommend them to my friends as opportunities occur."

COBDEN'S Pills (Quinine & Phosphorus). Mr. W. RANDALL, of Sanger's Amphitheatre, writes, October 8, 1877:—"I have derived immense benefit from taking 'Cobden's Pills.' For a long period I had been a martyr to nervous debility, and the existence I endured was sometimes unbearable. After taking them three weeks I am a new man. I eat well and sleep well, and giddiness, timidity, and lassitude have entirely gone."

COBDEN'S Pills (Quinine & Phosphorus). Are invaluable as a stimulant or brain tonic. They act, not as a stimulant only, but as a substitute, to some extent, for rest. A couple taken an hour or so before cessation of the day's work are found to remove sensations of fatigue, to give a clearness and dexterity to the mind, to produce appetite and a healthy digestion, and to conduce subsequently to the quiet sleep of which overwork so constantly deprives those whose occupation is mental.

COBDEN'S Pills (Quinine & Phosphorus) Mr. R. J. HAMILTON, 7 Salford Terrace, Tonbridge, writes, January 29, 1878:—"I can testify to their ('Cobden's Pills') being most valuable in relieving severe pains in the head, as also for Neuralgia."

COBDEN'S Pills (Quinine & Phosphorus). They act directly on the blood, vitalising and enriching it to a surprising degree, building up the system, and throwing off the germs of disease. They thoroughly recruit the general bodily health, and restore the nervous system to a proper healthy condition, no matter from what cause impaired.

COBDEN'S Pills (Quinine & Phosphorus). Should be adopted by all abstainers as having a better and more lasting effect as a stimulant than alcohol, without possessing any of its terrible consequences. They have a certain and speedy effect in repairing the partial dilapidations Time or Intemperance may have effected on the system. They fortify it against contagion, and infuse health and vigour to resist disease.

COBDEN'S Pills (Quinine and Phosphorus). The Rev. JOHN SHEWARD, writes from Milton, Sittingbourne, Kent, October 29, 1878:—"I am happy to inform you of the great benefit I have derived from your 'Cobden's Quinine and Phosphorus Pills.' I have been a sufferer for many months from extreme diarrhoea, great weakness, and severe mental depression; my nerves were so shattered that I dreaded the simplest duties, and lost all energy and pleasure in the performance of them. The despondency I endured became almost unbearable. I tried so many things without avail, that I began to fear my complaint would refuse to yield to any treatment. I saw your Pills advertised, but my little faith prevented me sending for them until the 7th inst., when I determined to try a 2s. 9d. box. The only thing that I now regret is that I did not send for them sooner. I have been taking them just over a fortnight, and the change in my health for the better is very marked. I have lost that horrible depression, my nerves are much stronger, and my general health very much improved. I cannot express how truly thankful I feel for the remarkable and pleasing change. I shall continue to take the Pills, and always resort to them on the first intimation of failing health."

COBDEN'S Pills (Quinine & Phosphorus). Vitalise, purify, and curch the blood. Regulate the supply of blood to diseased nerves. Non-irritating spinal nerves. Act as a brain tonic. Act as a general tonic. Are infallible in Neuralgia. Invigorate the whole system. Are the best tonic. They afford a ready mode of gaining strength. Are pre-eminent as a means of gaining appetite. Particularly useful for delicate females. Powerfully assist the digestive organs. Throw off germs of all diseases, and thoroughly recruit the general bodily health.

COBDEN'S Pills (Quinine & Phosphorus). May be considered a specific in Neuralgia. Their remarkably rapid and lasting effects in this complaint are perhaps their most striking therapeutical power. In this as in that of some other diseases, they exert a double power; in some instances merely regulating the blood supply to the affected nerves—in others acting in addition as a tonic or nourisher of the diseased spinal nerves, or of the affected nerves themselves. Three doses will invariably cure.

COBDEN'S Pills (Quinine & Phosphorus) increase the capacity for mental and physical exertion. If the patient has the dose while in a state of fatigue, then he feels his strength renewed; if while in a state of despondency he takes a more cheerful view of things. A state of depression *does not ensue*; therefore, whilst acting as a stimulant they differ from all other stimulants, as they leave no distressing after effects.

COBDEN'S Pills (Quinine & Phosphorus). Mr. H. COLEBY, Schoolmaster, Nutley School, Uckfield, writes, October 25, 1877:—"I can speak most highly of your 'Cobden's Pills' as a cure for Neuralgia and severe pains in the head. My sister suffered much for months, without finding any relief from other advertised remedies, till she tried a few doses of the Pills, which completely cured her. This was in May last, and she has not had a return of the pain. I have recommended them to several of my friends, and shall continue to do so, as I am thoroughly convinced of their therapeutical value."

COBDEN'S Pills (Quinine & Phosphorus).—Mr. RICHARD ROBINSON, Schoolmaster, All Saints' School, Crawley Down, Crawley, writes, November 19, 1877:—"I and my wife took 'Cobden's Pills,' and have derived considerable benefit from them—especially me. My appetite is increased, and I work better, sleep better, feel more 'a master' than I have for some years, and I am very pleased with and thankful for the results."

COBDEN'S Pills (Quinine & Phosphorus). Assist the digestive juices to convert what we eat and drink into healthy matter, so as to afford proper nourishment to the body. Are most useful in allaying the nervous, irritable, and weakly state occasioned by over brainwork, mental anxiety, loss of rest, violent shocks, fast living, overtaxing the powers, or from any of the causes combined under the head of "indiscretions of youth." They are easy to take, being very small and perfectly tasteless. They are prepared with the greatest care by duly qualified Chemists, with improved machinery and all the modern appliances for producing perfect admixture.

COBDEN'S Pills (Quinine & Phosphorus). Are food for the brain, blood, and nerves. Are a specific in Ague. Are infallible for all Low Fevers. Are a preventative of Contagion. Are very useful in Rheumatism. Are given with success in Gout. Are the best remedy for failing powers. They cure depression of spirits. Cure pains in the back. Cure Blood Poisons. Cure Melancholia. Cure Skin Eruptions. Cure Languidness. Cure Impotence.

SPECIAL NOTICE.

AGENTS WANTED.

Arrangements will be made with gentlemen undertaking the Agency and ordering not less than £5 worth for a local house to house distribution of handbills bearing their names and addresses. Special arrangements as to advertising the names of agents abroad. Handbills in any language.

All Wholesale Houses, or of the Sole Proprietors,
THE SUSSEX DRUG COMPANY, 135 Queen's Road, Brighton.

OZOKERINE

(REGISTERED).

A new preparation PERFECT as a BASIS for OINTMENTS, of admirable consistency, bland, emollient, antiseptic, and healing.

CANNOT BECOME RANCID.

"Moderate in price, and deserving a careful trial."—BRITISH MEDICAL JOURNAL.
 "A valuable and useful substance, and will in all probability be very largely used."—MEDICAL TIMES AND GAZETTE.
 "Will take a high position among our other pharmaceutical preparations."—MEDICAL PRESS AND CIRCULAR.
 "Likely to prove useful as a dressing for wounds and excoriations."—PRACTITIONER.

OZOKERINE is a clear, pale yellow, very slightly fluorescent body, composed of hydrocarbons akin to Paraffin in their chemical characters. It is produced from Ozokerit, or Earth Wax, by the separation of lighter and denser hydrocarbons, and subsequent purification by processes which remove smell and taste, and yield it in the pleasant form which has already gained for it a preference before other similar bodies.

OZOKERINE has been used with remarkable success as a simple *dressing for wounds*, its mild and healing properties rendering it peculiarly grateful to the patient.

OZOKERINE is unsurpassed as an *unguent basis*; *unchangeable* in itself, except by the action of the most powerful chemical agents, it preserves other bodies with which it may be incorporated from all tendencies to decomposition. The superiority of *Ozokerine to lard* in this respect cannot be over-estimated.

OZOKERINE, in addition to the above advantages, possesses that of being *moderate in price*, which marks it out as a preparation destined to supersede all other articles hitherto used for similar purposes.

Each Tin is stamped on the lid with the words "FIELD'S OZOKERINE, REGISTERED," without which none is genuine.

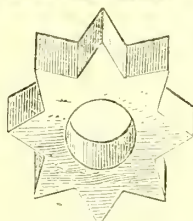
MADE ONLY BY

J. C. & J. FIELD.

To be obtained of all Wholesale Houses in the United Kingdom and the Colonies.

G. F. SNOOK & SON'S

NEW ARNICATED
STAR



OR WHITE SPREAD
SHAPE

CORN AND BUNION
PLAISTER.

CORN AND BUNION
PLAISTER.

(REGISTERED)

They will be found to possess greater advantages over all other Plaisters hitherto produced. Their chief qualities depend upon their superior adhesiveness, being composed of very adhesive ingredients, and, owing to their shape, are not so liable to be drawn off with the sock or stocking.

SPECIALITIES FOR THE SEASON.



SNOOK & SON'S "INSECTO." the most effectual exterminator for all kinds of Insects, ground from the finest selected Dalmatian flowers, and guaranteed pure. 3d., 1s. 9d.; 6d., 3s. 6d. per dozen. Each box is fitted with a perforated zinc top, so that it can be used as a dredger. One dozen to any Wholesale House in London for 24 or 48 stamps. Special quotations for large quantity.

1/4 lb.

Snook & Son's New Brighton Bath Gloves. Sponge Gloves are made with thumbs, and filled with Sponge; will be found the most perfect substitute for the Sponge yet introduced. 6s. 6d. per dozen Gloves.

Snook & Son's Pure Starch Violet Powder, richly perfumed, in handsome wrapper, as per illustration. One dozen, in a glass top box, 1/2-lb., 30s.; 1/4-lb., 60s. per gross.

Snook & Son's 1d. Violet Powder, Pure Starch, each Packet with guarantee, in Show Boxes for the counter, as per illustration. Per gross, 5s.

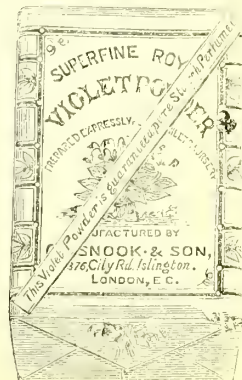
Snook & Son's 1d. Pure Fuller's Earth, each Packet with guarantee, packed in same style as the Violet Powder. Price per gross, 4s. 3d.

Snook & Son's 3d. and 6d. Fuller's Earth, in Round Fancy Gold Boxes, one dozen in a box. 3d., 18s.; 6d., 36s. per gross.

Any of the above goods may be had through all Wholesale Houses.

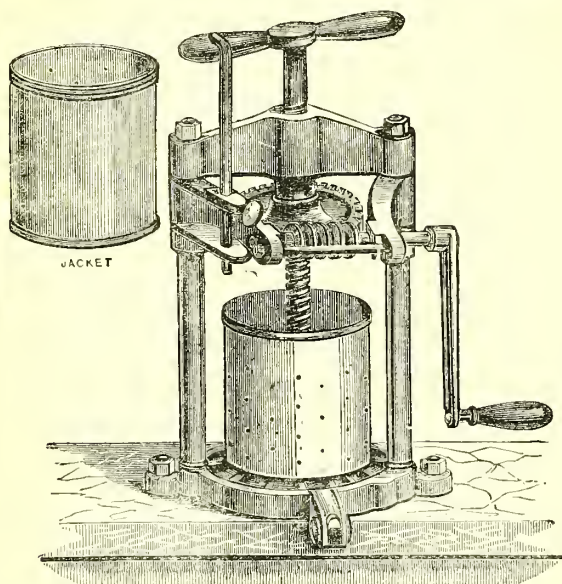
Price List or Samples free per post on receipt of business card.

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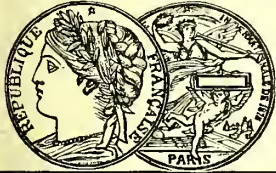
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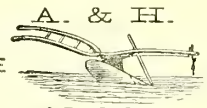
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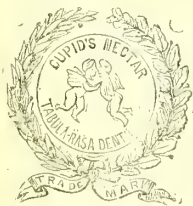
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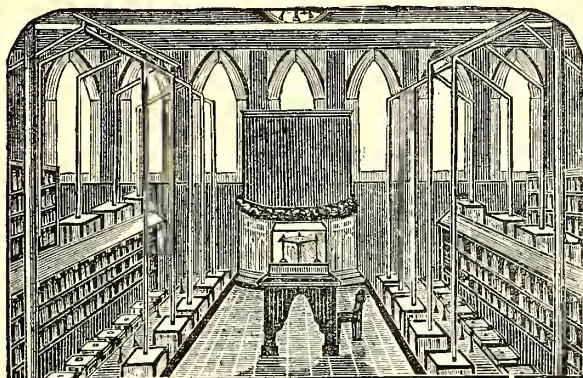
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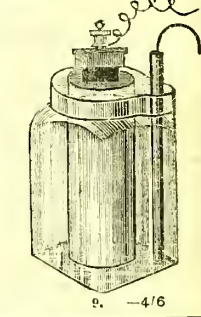
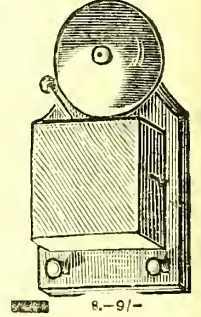
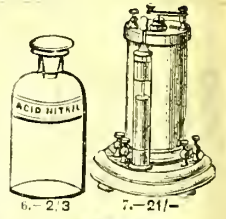
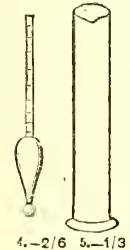
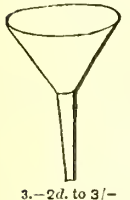
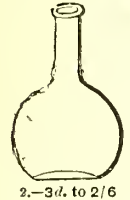
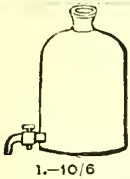
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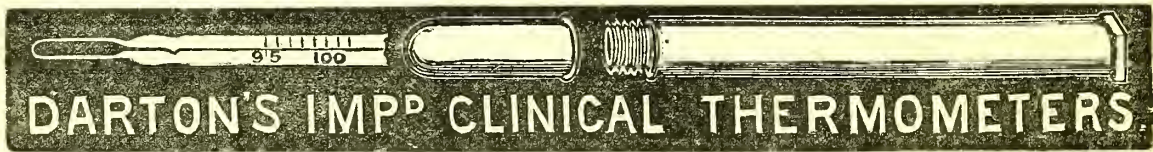


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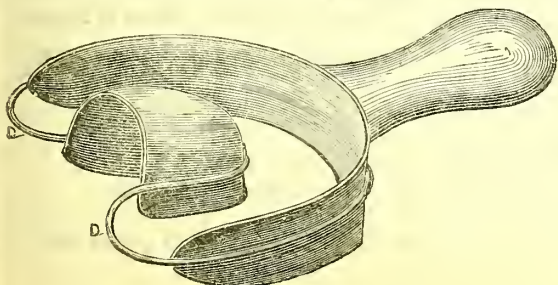


Fig. 1. The Tray empty.

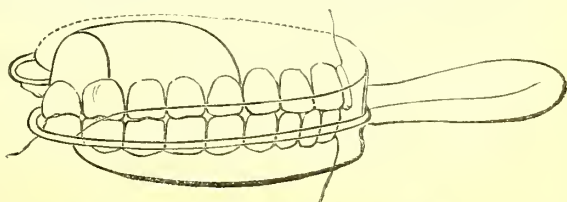


Fig. 2. The Tray in use.

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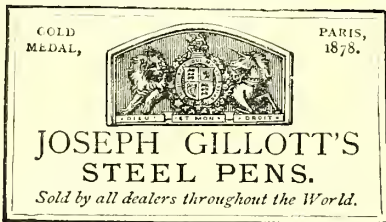
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GENTLEMAN (Young), giving up business, is desirous of obtaining a Situation in India as Assistant or Manager; extracts teeth; Minor qualification; highest references. O. W. R. Hunter, Lochee, Dundee.

AMERICA.—Wanted, a situation either in Canada or States; can dispense and prescribe (registered dentist); age 31; steady and active. F., 10 Shrewsbury Road, Bayswater, London.

WANTED IMMEDIATELY, a Situation as Assistant to Surgeon or Chemist; can prescribe well. Address, M. P. S., care of Mr. Fannell, Little London, Chichester, Sussex.

STeady, Trustworthy Assistant; aged 23; height 5 feet 7 inches; 4½ years' experience in a mixed Wholesale and Family Retail Business in a large manufacturing town in Yorkshire; desires an engagement in an establishment in which dispensing is one of the principal features, and in which he would have facilities for acquiring a knowledge of a good-class business; salary small; character bear strictest investigation. H. Robinson, Springfield, Guiseley, Leeds.

MISCELLANEOUS.

TO INDIAN AND COLONIAL CHEMISTS.

A Pharmacist of extensive experience in the Wholesale and Retail Trades, with a thorough knowledge of the best markets for the multifarious requirements of Colonial Traders, and able to give prompt and personal attention to every item, will be glad to ship additional indents at a commission of 2½ per cent., and all disbursements. Draft against documents, with approved London references. References, to well-known firms at home and clients abroad, on application to "Exporter," Millington & Hutton, Budge Row, London, E.C.

PRODUCERS OF ALUM CAKE are requested to furnish us with their Prices per Cwt. and per Ton. SUTTON & PHILLIPS, Works, Stowmarket, Suffolk.

BRIXTON HILL.—TO CHEMISTS, DRUGGISTS, AND OTHERS. MESSRS. E. & H. LUMLEY will SELL by AUCTION, at the Mart, E.C., on Tuesday, February 24, at Two o'clock, by direction of the Executors of the late Mr. Swires (unless previously sold), the LEASE of an old-established FAMILY and DISPENSING CHEMIST'S PREMISES, at Brixton Hill, held for a term of 20 years unexpired, at the very low rent of £75 per annum; also the valuable Goodwill, with the capital Shop Fittings and Stock-in-Trade, in One Lot. May be viewed. Particulars and Conditions of Sale to be had of Lumleys, Land Agents and Auctioneers, St. James's Street, Piccadilly, and of Messrs. Pearpoint & Co., Solicitors, 50 Leicester Square.

HUNTINGDON.

ELIGIBLE BUSINESS HOUSE AND PREMISES for Chemists and others.

MESSRS. DILLEY & SON have received instructions to SELL by AUCTION, at the George Hotel, Huntingdon, on Friday, February 20th, 1880, at seven for eight o'clock in the evening, the following valuable Property, subject to such conditions of sale as will be then produced.

All that valuable COMMODIOUS FREEHOLD BRICK AND TILED DWELLING-HOUSE, situate in the centre of the town, fronting the Market-place, with capital CHEMIST'S SHOP in front. There are large and convenient outbuildings in the yard at back of residence, enclosed by folding gates, leading into Cook's Lane; also a capital large walled-in garden adjoining at the back, and private entrance from the High Street, as now in the occupation of Mr. William Ekins, Chemist, Druggist, and Soda Water Manufacturer.

The Auctioneers beg to call special attention of Chemists and others in trade to this rare opportunity, as it is, through its commanding appearance and central position, together with large and suitable outbuildings, yard, garden, and every convenience for carrying on a large trade, the best place of business in the town of Huntingdon. The business of Chemist and Druggist and Soda Water Manufacturer has been carried on in the above for the past 25 years.

For further particulars apply to the Auctioneers, Market Place, Huntingdon; or to

Messrs. MAULE & SON, Solicitors, Huntingdon and St. Ives.

PRELIMINARY AND MINOR EXAMINATIONS.

STUDENTS who really desire to be thoroughly and carefully prepared, so as to ENSURE SUCCESS, should study under the **NO PASS, NO PAY, POSTAL SYSTEM.** For particulars enclose stamped envelope to TUTOR, care of Mr. Fittness, Rotherfield. Reference to pupils who passed in October.

PURE BEESWAX.

Quantity of BEESWAX, very finest quality, of good colour, and guaranteed Pure, price 1/8 per lb.

Good quality and colour, without guarantee, price 1/4 per lb.
Good Wholesale Wax, fine colour, price 1/- per lb.

Samples free.

HERBERT KEMP, High Street, HORNCASTLE.

E. PLOMER & CO., CHEMISTS TO THE VICEROY OF INDIA, SIMLA and LAHORE,

Will be pleased to hear from Manufacturers and others desiring to introduce Specialities and Novelties, &c., into India.

London Agents—MESSRS. A. DURANT & CO.,
89 Gresham Street, E.C.

HIGGINSON'S ENEMAS.

BEST QUALITY, with Elastic Vagina Pipe and Shield, and Bone Rectum Pipe, in Slide Cedar Boxes, per doz. 28s.

Sample quarter dozen to any City Drug House for enclosure on receipt of P.O.O. for 7s.

JOHN CENTRETON,

103 Murray Street, New North Road, London, N.,

LATE OF 201 CITY ROAD, E.C.

' **GOLDEN** Trade Mark.  Registered. **STAR** '
 BAY LEAF WATER.

The Only True and Genuine. Unrivalled in Richness and Delicacy.

Put up in an Attractive Form, and commands a Ready Sale.

The above quality has never before been offered in the English market. Its immense sale has heretofore been confined to America and West Indies. It is offered with the positive assurance that it is unequalled, and a successful rival with all other fine Toilet Waters.

SUPPLIED BY ALL WHOLESALE DEALERS.

Distillers' Agency: 114 and 116 Southampton Row, LONDON, England.

"PERFECTION"

MRS. S. A. ALLEN'S
World's
Hair Restorer



Never fails to restore Grey Hair to its youthful colour, imparting to it new life, growth, and lustrous beauty. Its action is certain and thorough, quickly banishing greyness. It is not a Dye. It ever proves itself the natural strengthener of the Hair. Its Superiority and Excellence are established.

The **GENUINE** only in **PINK WRAPPERS** Sold by all Chemists & Perfumers

Principal Depot: 114 & 116 Southampton Row, LONDON, England.



YOUNG'S

ARNICATED WHITE FELT

CORN & BUNION PLASTERS.

INVENTED AND ESTABLISHED BY

HENRY YOUNG,
A.D. 1846,

AND FAVOURABLY KNOWN ALL OVER THE GLOBE.

REDUCED PRICES.

Arnicated White Felt Corn Plasters.

Thin, 12 in box (round 6d. boxes)..... 2/4 per dozen boxes.
Thick, 12 in box (original 1s. fancy boxes) 3/4 "
Thin, 1 gross in box1/10 per gross.
Thick, 1 gross in glass top box3/0 "

Arnicated White Felt Bunion Plasters.

Small thin, 6 in box (round 6d. boxes).....2/4 per dozen boxes.
Thick, 6 in box (original 1s. fancy boxes)...4/0 "
Thin, 1/2-gross in box.....4/0 per gross.
Thick, 1/2-gross in glass top box6/0 "

EVERY LEADING HOUSE SUPPLIES THEM.

MANUFACTORY—72 CLERKENWELL ROAD, LONDON, E.C.

ROT IN SHEEP.

IMPORTANT TO CHEMISTS.

The terrible ravages of *Distoma Hepaticum*, or Liver Rot in Sheep, in 1879 and 1880, and in previous years, has led to minute inquiry as to the cause and effect of this parasite, and means best adapted to remove it from the liver or prevent its development. Last year we brought out a specific, which we are glad to say has more than realised our expectation, and after a year's trial we find it to have answered most effectually, and has proved itself both Cure and Preventative. As the Rot is extending daily, and 1880 is very likely to be the most disastrous year in this century, from the long-continued wet, we shall be glad to supply Chemists with

BRADBURY'S OZONIC POWDERS, FOR ROT OR COTHE IN SHEEP.

On the best terms; and, as we are widely advertising them, a large trade is anticipated, this being the only preparation ever known to cure or prevent Rot. Every immediate facility will be given to Agents, and early application is requested.

S. BRADBURY & CO., LIMITED,
Tranmere Works, Birkenhead.

PULVIS JACOBI VERUS (THE TRUE "JAMES" POWDER), PREPARED BY

W. Hooper

Has an acknowledged reputation as an Antimonial, and its value and efficacy is verified by a continued and increasing sale in the Indian Empire. Sold in 1 and 4-oz. Bottles (Troy), at 2/9 and 10/6; also in Packets for transmission by Post.

W. HOOPER & CO., 24 Russell Street, Covent Garden.

BEST SEIDLITZ POWDERS. JAMES C. CHUBB

Supplies the above, loose, at 7/- per gross; and in boxes at 8/-, 9/-, and 10/- per doz., through the Wholesale Houses, or from 29 OLD STREET, LONDON, E.C.; and will forward list of articles packed by him on application.

Dr. C. R. Coffin's AMERICAN DENTIFRICE.

Prepared only by WILLIAM DARLING, Chemist, Manchester. May be had from S. Maw, Son, & Thompson; Barclay & Sons; F. Newbery & Sons; Sanger & Sons; and any Wholesale House in London. Price 2s. per Box, and Family Jars 10s. each.

READ THIS.

BAYLY'S LAUNDRESSES' FRIEND (REGISTERED).

Once used will always be required. One trial will prove its value to Ladies, Housekeepers, and Laundresses for the brilliant gloss and stiffness it imparts to all kinds of Linen, especially to Shirt Fronts, Collars, &c., and can be used with equal success in hoiled and cold water starch. Sold by all Chemists, in 1d. and 3d. Packets, and 6d. Tins. 1d., 8s.; 3d., 24s.; 6d., 45s. gross, less 10 per cent. for cash.

AGENTS—Messrs. Barclay & Sons, Farringdon Street; J. Sanger & Sons, 252 Oxford Street; W. Edwards & Son, 157 Queen Victoria Street; W. Sutton & Co., 10 Bow Churchyard, London; Goodall, Backhouse & Co., Leeds; Evans, Gadd & Co., A. Hunt & Co., Exeter.

PREPARED BY

G. W. BAYLY,
59 MACDONALD STREET, BIRMINGHAM.

1/6 JUDSON'S 1/6 GOLD PAINT.

{ 1 Bottle Gold Powder	} 12s. per dozen sets. Six sets on a card, or each set in card box.
{ 1 " Mixing Liquid	
{ 1 Mixing Bowl	
{ 1 Brush	
{ 1 Bottle Gold Paint	} 10s. 6d. per doz. sets. Six sets on a card, or each set in card box.
{ 1 " Mixing Liquid	

For regilding picture and glass frames.
For gilding lamp stands and gas-fittings.
For renewing ormolu ornaments.
For illuminating on paper, silk, or leather.
For artistic cabinet work.
And for a thousand useful and domestic purposes.

HEATH'S SUCCESSFUL TASTELESS CURE FOR SEA SICKNESS

Is perfectly harmless, and does not produce Headache or any other Derangement.

Letter from GENERAL SIREDDWARD WARDE, K.C.B.
October 14, 1878.

SIR,—You will be glad to hear that one of my sons, who crossed over to Dublin in the gale last week, found your Powder, as he says, "a brilliant success." He gave some to a friend of his who was, like himself, a bad sailor, and the success was undoubted in both cases. You can make what use you like of this. Yours faithfully,

E. C. WARDE.

ALFRED HEATH & CO.,
Wholesale and Retail Homœopathic Chemists,
114 EBURY ST., LONDON, S.W.

PACKET TEA AGENCY,

Agents Wanted. Commission Liberal.
Quality Guaranteed.

RETAIL PRICES FROM 1/10 to 3/4 PER LB.

APPLY TO

JOHNSON, JOHNSON & CO.,
WHOLESALE TEA DEALERS,
50 Southwark Bridge Road, London.

Established nearly Quarter of a Century.

Upwards of Five Thousand Agents now Sell these Celebrated Teas.

ESTABLISHED 1843.

THOMPSON & CAPPER, WHOLESALE & EXPORT HOMŒOPATHIC CHEMISTS,

55 Bold Street, Liverpool,

AND

51 Piccadilly, Manchester.

NEW ILLUSTRATED PRICE LIST ON APPLICATION.

THOMPSON & CAPPER have recently purchased the long-established business of HENRY TURNER & CO., Manchester, which they now carry on under their own name.

THOMPSON & CAPPER'S DENTIFRICE WATER

Is kept by T. & C.'s Agents throughout the world.

PRICE CARD ON APPLICATION.

SPECIAL NOTICE!

SPONGES.

It is a well-known fact that Retailers of Sponges (who buy them by the case) very often lose money by them, or at best do not know what they make out of them.

We are therefore laying ourselves out to supply Sponges of various sizes, mounted on attractive Cards, showing a good profit to both Wholesale and Retail.

One Dozen on Card, 8s. 0d. per Gross.

Half-dozen „ **5s. 6d. per Doz.** WONDERFUL VALUE.

Half-dozen „ **11s. 0d. per Doz.** THE HOUSEMAID'S SPONGE.

One only „ **32s. 0d. per Doz.** THE NURSERY SPONGE.

Window Cleaners, a really good Sponge enclosed in a really good

Wash Leather. **11s. per Doz.** Half-dozen on Card.

SHOULD BE SEEN TO BE APPRECIATED.

Discount 12½%

OUR USUAL DISCOUNT TO WHOLESALE.

DANIEL JUDSON & SON, 77 Southwark St., London.

Erhardt & Co.
 9, Bond Court, WALBROOK,
 LONDON, E.C.
 Manufacturers of * * * * *

Patent Parchment,
 SOFT ELASTIC, White or Coloured, for tying
 over Drugs, Preserves, &c., CAPPING and
 CORKING Bottles of Chemicals, &c., &c.

White Split Skins,
 Best quality only, for CAPPING Bottles,
 from 7/6 to 20/- per doz. Also Coloured Splits.

Transparent Skins,
 In different qualities, for CAPPING Bottles.

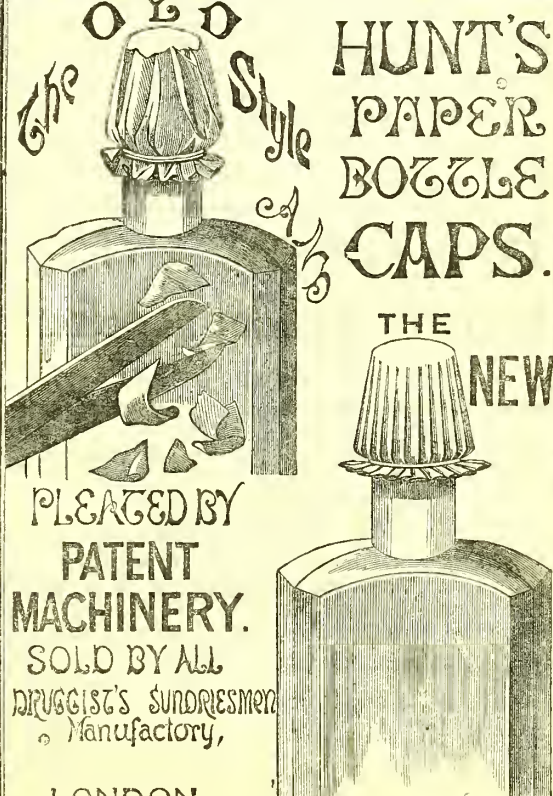
Tinfoil, Chemically Pure, and Polished
 made in any thickness from 15
 to 60 square feet to the lb. Also Mixed
 Foil, Coloured and Gold Foil, plain or embossed.

Metallic Capsules.
 Also Tinfoil Papers, Gold, Silver, Fancy
 or Capping Papers, as used by Chemists, &c., &c.
 Capsuling Machines 35/ each.

Field & Tuer, ye Leadenhalls Presse, London, E.C. 12, 708

The Old Style

**HUNT'S
 PAPER
 BOTTLE
 CAPS.**



THE NEW

PLEATED BY
**PATENT
 MACHINERY.**

SOLD BY ALL
 DRUGGIST'S SUNDRIESMEN
 & Manufactory,

LONDON

3, 4 and 5 Little Windmill Street, Golden Square.

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WHITAKER & GROSSMITH'S PURE WHITE GLYCERINE SOAP.

Richly perfumed, and guaranteed to contain the necessary quantity of GLYCERINE for effectually imparting to the SKIN the softening and healing properties for which it is so justly famed. 1s. 6d. Boxes of Three Tablets, 12s. per Dozen Boxes.

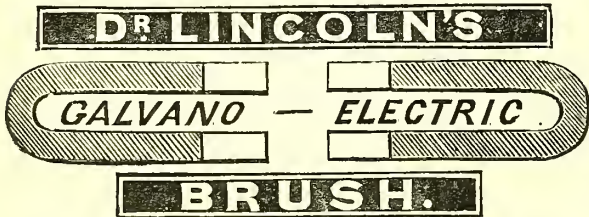
SELECT TOILET PREPARATIONS, extensively increasing in demand, which attests their excellent quality.

TOILET SOAPS.		Per doz.		BOUQUETS.		Per doz.		POMADES, &c.		Per doz.	
Cent-Fleur (copyright)	2/6	Boxes of 3 tablets	20/	Cent-Fleur (copyright)				Cent-Fleur (copyright)	8/	12/	& 20
Jockey Club	1/6	"	12/	Star of India	...	In Glass	12/	Petroleum Pomade	...	12/	& 18
Sandringham	1/6	"	12/6	White Lilac	...	Stopped	) 8/	Brilliantine	...	8/	12/
Eucalyptus Oil	1/6	"	12	Birthday	...	or		Anglo Eau de Cologne	...	8/	& 12
Wild Thyme (Thymol)	1/	"	8	Hawthorn	...	Sprinkling		Eucalyptus Vinegar	...	12/	& 12
Semi-Cut Bars	1/	Bars of 6 kinds	8/6	White Violet (and 50 others)	...	cap	24/	White Cherry Tooth Paste	8/	& 12	

Trade Price Lists sent and Orders executed through Wholesale Houses, or direct from the Manufacturers,

WHITAKER & GROSSMITH, Wholesale Perfumers, 120 Fore Street, City, London.

THE TOOTH BRUSHES TO SELL!!



"SALTER'S PERFECT PATTERN,"
"THE GRIP."

Each of the above has "every bristle secured" by our new "Grip" process.

Samples of all three, with Showcards, sent free on receipt of 2s. in stamps.

G. SALTER & CO.,
RED LION SQUARE, LONDON,
OR THROUGH WHOLESALE HOUSES.

THE MOST PROFITABLE BRAND.
EAU DE COLOGNE
OF THE
NUN

MARIA CLEMENTINE MARTIN,
OPPOSITE THE CATHEDRAL, COLOGNE.

SOLE AGENT FOR THE UNITED KINGDOM—
ARTHUR I. JOSEPH, St. Leonard's-on-Sea.

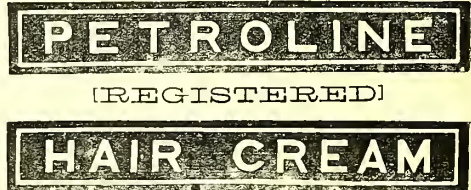
PRICE LIST.—Duty paid, net. In bond.

2 oz. shorts, Eau de Cologne	8/-	..	..	5/-
4 oz. "	15/-	..	..	10/-
4 oz. "	20/-	..	..	15/-
Half-pints	25/-	..	..	17/3
Pints	50/-	..	..	34/6
Quarts	100/-	..	..	69/-

Small Cases assorted to order (of not less than 3l. value in bond) delivered free freight to London, less 7 1/2 per cent. discount. May be obtained on these terms of any Wholesale House, or at the London Depot—

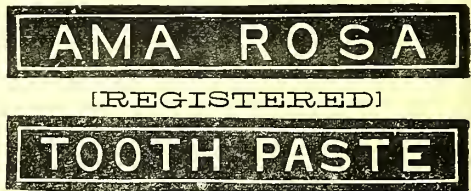
14 Australian Avenue. H. C. MASON, Agent.

LUXURIANT HAIR.



THE MOST POWERFUL OF HAIR PRODUCERS.
It causes the Hair to grow on Bald Spots, by nourishing and vitalising the capillaries, and is the only preparation which specially acts on the Roots of the Hair. It preserves and prevents the Hair from falling off, and removes dandruff; allays all irritating sensations, and imparts a richness, lustre and softness unapproached by any other preparation. As a Hair Dresser Preserver, and Producer it is unequalled. Retail price, 3s. 6d. per Bottle (cased). To the Trade, 27s. per dozen, less 10 per cent. Handsome Show Cards and Bills with each order.

DR. DELORME'S



IN COLLAPSIBLE TUBES AND GLASS TOP BOXES.
The quantity contained in these Tubes is greater than a Pot of corresponding price. Retail, 6d. and 1s. each. Special quotation, 3s. 3d. and 6s. per dozen net. Cards and Bills with every package.

Sole Proprietors—NERWICH & CO.,
WYNNE ROAD, BRIXTON, LONDON, S.W.

The Proprietors are prepared to treat for spaces in Price Lists. Terms on application.

GREENSILL'S FAR-FAMED MONA BOUQUET

THE ORIGINAL AND ONLY GENUINE.
The great popularity of this exquisite Perfume is a proof of its excellence and superior qualities.

T. S. GREENSILL, Chemist, Douglas, Isle of Man,
Inventor, Proprietor, and Maker.

AGENTS—LONDON: Sanger; Maw; Edwards; Newbery; Mather; Barclay; Whitaker & Grossmith; Hovenden; Parton & Osborne; Butler & Crisp; Tidman & Son; Barron & Squire; Wright, Layman & Umney; Jno. Thompson; Burgoyne, Burbidge & Co.; Grimwade, Ridley & Co.; Bais Brothers. LIVERPOOL: Evans, Sons & Co.; Clay, Dod & Case; R. Sumner & Co.; Raines & Co. MANCHESTER: J. Woolley; Lynch & Bateman; Jewsbury & Brown; Mather. EDINBURGH: Duncan & Flockhart. DUBLIN: M'Master; Hodgson. YORK: Sutcliffe & Headley; Clark, Bleasdale. THIRSK: Wm. Foggitt. BRISTOL: Ferris & Co. LEEDS: Goodhall & Backhouse. BIRMINGHAM: Churchill & Son; P. Harris & Co.; Parton & Osborne; Southall Bros. & Barclay.
Agents for CALCUTTA: Smith, Stanistreet & Co. MONTREAL: Sugden, Evans & Co. NEW ZEALAND: Kempthorne, Prosser & Co. MELBOURNE: Grimwade, Ridley & Co.

Introduced in 1852.

Registered Trade Mark—"Tower of Refuge, Douglas Bay."

ESTABLISHED 100 YEARS.

TOILET AND FANCY SOAPS
OF EVERY DESCRIPTION.

CHOICE PERFUMES IN BULK.

- o. 1 extra 12/ per pint of 20 ozs.
 - o. 1 9/6 " "
 - o. 2 8/ " "
- Put up also in great variety of size, style, and price.

SOAPS.

- inc. Sulphur, Petroleum, 6d. & 1/
- etroline, Juniper Tar, & 4/ & 8/
- ber Medicinal Soaps .. 1 doz.
- lycerine Jelly, 6d. and 1/
- oppered bots., 4/ & 8/
- er doz.

T. F. BRISTOW & CO.
TOILET SOAPS & PERFUMERY.
MANUFACTURERS.

PRICE LISTS
ON APPLICATION.

BRISTOW'S SPECIALTIES.

- Carbolic Acid Soap, ... In boxes 3 tblts.
- Glycerine and Carbolic Acid 1/ & 1/6
- Glycerine and Oatmeal Soap .. 8/ & 12/ per dz.
- Baby Soap for Nursery use { In boxes, 4 & 12 tblts.
- (Illustrated Label) 1/9 and 2/7 per doz.
- Family Soap, in boxes, 4 & 12 tblts (1/ & 2/9) 8/ & 24/ "
- Cold Cream Soap, in boxes, 3 tbs. in box (1/6 & 2/6) 12/ & 21/ "
- Stockholm Tar Soap } in boxes, 3 tablets in box (1/6) 12/ "
- Pure Coal Tar Soap ... } in 4z., 6d. & 8d. tblts, in 3 doz. boxes, 2 6, 3/6, 4/6 doz.
- Transparent Soap, in boxes 3 tablets (1/ and 1/6) 8/ & 12/ "
- Superior Lavender Soap, in boxes, 3 tablets (1/ and 1/6) 8/ & 12/ "
- White Glycerine Soap, in boxes, 3 tablets (1/6) 12/ "
- Dog Soap (Illust. Wrapper), Carpet & Cloth Soap, Pumice Stone Soap (6d. & 1/) .. 3/6 & 7/ doz.

5 BISHOPSGATE AVENUE, LONDON.

H. BESSEMER'S GOLD PAINT,

RETAIL PRICES:—

- Small Bottles of Gold with Liquid 1s. 6d.
 - Medium " " & Bowl & Brush 2s. 6d.
 - Large Bottles of Gold 3s. 6d.
 - " " Liquid 0s. 6d.
- To be obtained of all Chemists, Artists' Colourmen, and Druggists' Sundriesmen.

NEW 1/6 & 2/6 PACKETS.

CONTENTS:—1 Bottle Gold Powder, 1 Bottle Mixing Liquid, 1 Mixing Bowl, 1 Brush, in Cardboard Box.

Where the Bowl and Brush are not required, the usual 1/6 Packet should be purchased, as it contains a large quantity of both Gold and Liquid.

COPPER AND SILVER PAINT, AT THE SAME PRICES, AND YIELDING EQUALLY GOOD RESULTS, CAN BE OBTAINED.

SOLE PROPRIETOR AND MANUFACTURER,

RICHARD J. ALLEN,
MANSFIELD PLACE, KENTISH TOWN,
LONDON, N.W.

Translations are supplied, Circulars, Cards, or Labels will be printed in any language necessary for its sale.

FOR CLEANING PLATE.

BRADLEY & BOURDAS'S

ALBATUM or WHITE ROUGE,

For Cleaning Gold, Silver, and Plated Goods.

Since its introduction as a substitute for the ordinary Rouge, a quarter of a century ago, the sale has amazingly increased both at home and abroad. A trial is only needed to prove its superiority over other plate powders in use. Sold in Boxes at 1s. and 2s.; Tins, 6s. 7 Pont Street, Belgrave Square, and 48 Belgrave Road, London, S.W.



For more than a Quarter of a Century this Powder has sustained an unrivalled reputation throughout the United Kingdom and the Colonies as the BEST and SAFEST article for Cleaning.

Sold in Boxes, 1s., 2s. 6d., and 4s. 6d. each. Also
GODDARD'S FURNITURE CREAM,
Sold by all Patent Medicine Houses and Wholesale Druggists,
Manufactured by J. GODDARD, Station St., Leicester.

DIPLOMA OF MERIT, VIENNA EXHIBITION, 1873.

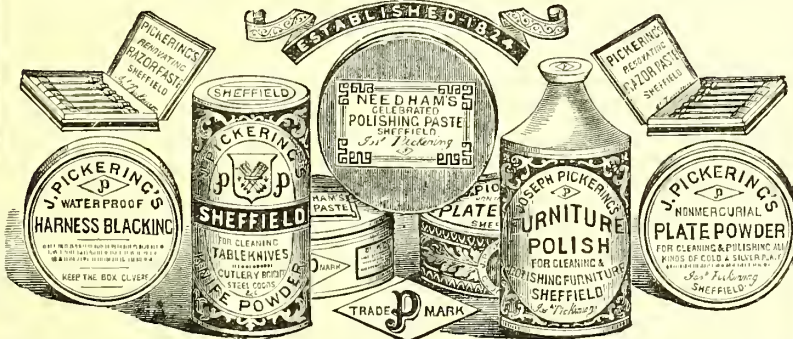
Joseph Pickering & Sons (J. Needham), Albyn Works, Sheffield,

MANUFACTURERS OF

Needham's Polishing Paste,
For Cleaning Brass, Copper, and Britannia Metal Goods, &c.

Pickering's Razor Paste,
For Sharpening Razors, &c.

Waterproof Harness Blacking,
For Black Leather Harness.



SOLD BY ALL CHEMISTS, GROCERS, IRONMONGERS, ETC.

Sheffield Knife Powder,
For Table Knives, Fire Irons, &c.

Plate Powder,
For Electro-plate Articles, &c.

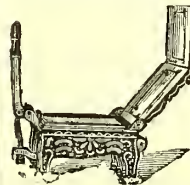
Furniture Polish,
For cleaning French Polished Furniture, &c.

Brunswick Black,
For all kinds of Iron Work.

OKELL'S ORIGINAL MONA BOUQUET

Retail, 1/1, 1/9, and 3/6; Wholesale, 9/1, 15/1, and 30/ per doz.
This much-admired Perfume (prepared by the Widow of the late Joseph Okell), may be obtained from the leading Patent Medicine Houses, Wholesale Druggists, and Druggists' Sundry Dealers.
Applications for WHOLESALE Agencies to be made to the SOLE CONSIGNEE, **THOMAS WEST, Chemist, Stretford, Manchester.**

INTERNATIONAL EXHIBITION, 1870.
283, CLASS 3.



Every Man his own Printer
PRINTING PRESSES (all Iron) 25s. complete, to £10 10s.
Specimens of Work, One Stamp.
Inventor

JABEZ FRANCIS, Rocliford, Essex.
Type and Materials for Amateurs.
Amateur's Guide, 64 pp., 13 stamps.

INDEX TO ADVERTISEMENTS,
See pages 41, 42.

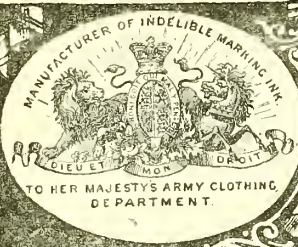

PHOENIX ESTABLISHED A.D. 1815 **MARKING INK**

GENUINE INDELIBLE

THE LEADING & STANDARD ARTICLE

PREPARED ONLY BY THE WIDOW OF THE LATE
JOHN MURPHY
CHEMIST AT THE ORIGINAL ESTABLISHMENT
11, NILE STREET, EAST ROAD, HOXTON N.

NO OTHER ADDRESS — BEWARE OF WORTHLESS IMITATIONS.

RIMMEL'S NEW SANITARY APPLIANCES.

RIMMEL'S AROMATIC OZONIZER, a fragrant powder which, simply spread on a plate in apartments or places of public resort, evolves the refreshing and healthy emanations of the Pine and Eucalyptus, and produces a quantity of *Ozone*, the great air purifier. It is in use in the principal Hotels, Clubs, and Theatres, and also in the Saloons and Cabins of several Lines of Steamships. In 4 oz. tins, 1s.; by post for 15 stamps; 1 lb. tins, 3s. 6d.; Spreading Plate, 6d.

RIMMEL'S OZONIZED EAU DE COLOGNE, LAVENDER WATER, or FLORIDA WATER, sprinkled on a pad hung up in the air, destroys bad smells and noxious effluvia in sick rooms' closets, &c. It is recommended also to be used on the handkerchief when attending crowded places, visiting the sick, or travelling by land or sea. Price, 2s. 6d. and 5s. per bottle; pad, 1s. A box containing a Tin Aromatic Ozonizer, a Plate, a Bottle Ozonised Eau de Cologne, and a Pad, 5s.

RIMMEL'S NEW TRANSPARENT COAL TAR SOAP, combining the purifying properties of tar with the refined qualities of transparent soap. Price, 1s. 6d. per box of 3 cakes.

N.B.—Those preparations have been submitted to the examination of eminent Chemists, who have certified their excellent effect. A detailed prospectus, containing certificates and testimonials, sent on application.

Sold by all Chemists and Druggists. The usual allowance to the Trade. Wholesale Price Lists sent on application to—

EUGENE RIMMEL, *Perfumer to H.R.H. the Princess of Wales,*
96 STRAND, LONDON.

R. H. MILLARD, SON & APPLETON,

40 CHARTERHOUSE SQUARE, LONDON, E.C.,

WHOLESALE AND EXPORT DRUGGISTS' SUNDRYMEN,

PATENT MEDICINE VENDORS, FEEDING BOTTLE MANUFACTURERS, ETC., ETC.



MILLARD'S TOILET REQUISITES & SPECIALITIES.

The attention of the Trade and Export Purchasers is called to the undermentioned articles. Command a ready sale wherever introduced.

MILLARD'S ARECA NUT TOOTH PASTE.—Highly Recommended for the Teeth and Gums. In Pots, 1s. each. Wholesale, 8s. per dozen.

MILLARD'S CHERRY TOOTH PASTE.—An elegantly-prepared Dentifrice for the Teeth and Gums. In Pots, 1s. each. Wholesale, 8s. per dozen.

MILLARD'S SUPERFINE HIGHLY SCENTED VIOLET POWDER.—In Packets, 4d., and Fancy Octagon Boxes, 6d. and 1s. each. Wholesale, 2s. 6d., 4s., and 8s. per dozen.

MILLARD'S PREPARED FULLER'S EARTH.—In Fancy Octagon Boxes, 6d. and 1s. each. Wholesale, 4s. and 8s. per dozen.

MILLARD'S "INVISIBLE" FACE POWDER.—An exquisite Toilet Preparation for Beautifying and Preserving the Complexion. Specially adapted for use in Hot Climates. Packets, 6d., and Enamel Boxes, with Puff, 1s. and 2s. each. Wholesale, 3s., 8s., and 16s. per dozen.

MILLARD'S FEEDING BOTTLES.— Per doz.

No. 1. Straight white glass, earthenware tops ... 6d. 4s.

No. 2. Bent white glass, earthenware tops ... 6d. 4s.

MILLARD'S FEEDING BOTTLES.—

No. 3. Straight white glass, boxwood tops ... 6d. 3s. 9d.

No. 4. Bent white glass, boxwood tops ... 6d. 3s. 9d.

MILLARD'S FEEDING BOTTLES.—

No. 5. Straight green glass, earthenware tops ... 6d. 3s. 9d.

No. 6. Bent green glass, earthenware tops ... 6d. 3s. 9d.

MILLARD'S FEEDING BOTTLES.—

No. 7. Straight green glass, boxwood tops ... 6d. 5s. 6d.

No. 8. Bent green glass, boxwood tops ... 6d. 5s. 6d.

MILLARD'S FEEDING BOTTLES.—

Bent white glass, white earthenware tops, complete with tube and bottle brush in card box ... 1s. 7s.

MILLARD'S MARKING INK,

A PERMANENT AND RELIABLE INK,

Registered Trade Mark and Title.

"NIGROLINE,"

[Registered Trade Mark and Title,

Sixpenny .. 3/6 per dozen.

One Shilling .. 7/- per dozen.

The whole of the above-mentioned articles are subject to the usual Trade Discount. Special Terms to Wholesale and Export Purchasers.

A New Edition of our Price List will be ready early in February, and will be forwarded free per post on receipt of trade card to

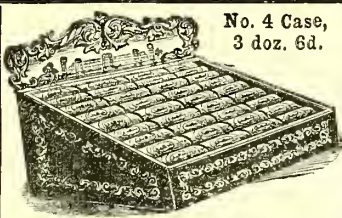
R. H. MILLARD, SON & APPLETON, 40 CHARTERHOUSE SQUARE, LONDON, E.C.

CAUTION I AM DETERMINED TO PREVENT IN ALL CASES EVERY COLOURABLE IMITATION, TO PROTECT MY RIGHTS & PROPERTY

6d. Per Gross, 30s.

THE ONLY GOLD MEDAL MARKING INK WITHOUT PREPARATION PREPARED BY THE DAUGHTER OF THE LATE JOHN BOND. 75 SOUTHGATE R. LONDON. W. WORKS. REGISTRATION APPOINTMENT TO THE QUEEN & COURT OF HOLBORN.

DELIVERED IN PARCELS OF 1 DOZEN OR IN PACKETS OF 1 DOZEN



In Elegant Boxes Of 4-dozen.

1s. Pedestal.

1s. Per Gross, 60s.

THE ONLY GOLD MEDAL MARKING INK WITHOUT PREPARATION PREPARED BY THE DAUGHTER OF THE LATE JOHN BOND. 75 SOUTHGATE R. LONDON. W. WORKS. REGISTRATION APPOINTMENT TO THE QUEEN & COURT OF HOLBORN.

DELIVERED IN PARCELS OF 1 DOZEN OR IN PACKETS OF 1 DOZEN

GREAT REDUCTION OF PRICES. 6d. and 1s. PEDESTALS, Glass Cases included.

10 Per Cent. off £100 Orders.

COMMON PLEAS DIVISION, JAN. 15, Sittings before Lord Coleridge and Justices Grove and Denman.) HICKISSON v. ASPTON. Defendant moved for a NEW TRIAL, application REFUSED. This action, which was brought on the alleged infringement of the Plaintiff's Trade Mark, was tried at the last sittings at Guildhall, before Mr. Baron Cleasby, when the verdict was for the plaintiff with damages. The PLAINTIFF was the HUSBAND OF THE DAUGHTER OF THE LATE JOHN BOND, the PROPRIETOR OF BOND'S CRYSTAL PALACE MARKING INK. The Defendant was a Druggist, and he had sold a marking ink manufactured by J. R. Murphy, and the Plaintiff complained that the Labels on Murphy's Ink were an infringement on his Labels. A TRADE MARK is not only a SYMBOL of CHARACTER, but the general appearance of a label, whereby the public would be deceived. Their Lordships this morning, after consulting Mr. Baron Cleasby on the matter, refused the rule, that learned Judge having expressed his satisfaction with the verdict. — RULE REFUSED. Side daily papers. Messrs. Wills & Watts, Solicitors for the Plaintiff, Doctors Commons, E.C.

WANTED,
Sole Agency for a Good Speciality.

Covered Vans to the City and West End and all parts of London twice daily. Would arrange for advertising the same for a stated sum, and having had a very large and extensive experience in advertising, would thereby effect a great saving to the proprietor.

20% OFF £100 ORDERS. PLEASE TO ORDER PARCELS NOT CONTAINING WEST. EACH BOTTLE CHEMICALLY SEALED. NO DRYING UP.

20% OFF £100 ORDERS. IMPORTANT! NO HEATING REQUIRED. CHEMICAL PREPARATION. SUPERSOLES ALL OTHERS. IT REQUIRES NO FILLING. MUCH ASKED FOR.

20% OFF £100 ORDERS. READ EXPORT LIST AS ON OTHER SIDE AND BE ASTONISHED AT THE REDUCTIONS.

20% OFF £100 ORDERS.

20 Per Cent. off £100 Orders.

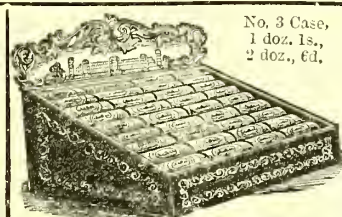
BOND'S MARKING INK. — CAUTION to Wholesale and Retail Dealers. — TAKE NOTICE that on Nov. 28th, 1877, IN AN ACTION "HICKISSON v. ANOTHER against MURPHY," JUDGMENT was given for PLAINTIFF, WITH DAMAGES AND COSTS, AND A PERPETUAL INJUNCTION GRANTED RESTRAINING the said MRS. MURPHY and her AGENTS FROM USING the word "BOND" upon any Labels or Pedestals manufactured by or for her, OR FROM IN ANY WAY REPRESENTING THE INK MANUFACTURED BY HER TO BE BOND'S MARKING INK. J. HICKISSON, Proprietor of the Daughter of the late John Bond's Crystal Palace Marking Ink, 75 Southgate Road, London. Wills & Watts, Solicitors.

No. 1 CASE, Desk Shape containing 1 doz. 1s. Pedestals, with Ink, Pens, and Linen Stretcher. 3 doz. 1s. Crystal Palace and Royal Indelible, 1s. No. 2 CASE, containing 3 doz. 1s. Crystal Palace and Royal Indelible, 1s. No. 3 CASE, containing 1 doz. 1s. Crystal Palace and Royal Indelible, and 2 doz. 6d. do. do. 1s. No. 4 CASE, containing 3 doz. 6d. Crystal Palace and Royal Indelible 6s. 6d.

1s. 20 Per Cent. off £100 Orders

THE ONLY GOLD MEDAL MARKING INK WITHOUT PREPARATION PREPARED BY THE DAUGHTER OF THE LATE JOHN BOND. 75 SOUTHGATE R. LONDON. W. WORKS. REGISTRATION APPOINTMENT TO THE QUEEN & COURT OF HOLBORN.

DELIVERED IN PARCELS OF 1 DOZEN OR IN PACKETS OF 1 DOZEN



In Elegant Show Boxes of 4-dozen.

1s. Pedestals.

6d. 20 Per Cent. off £100 Orders

THE ONLY GOLD MEDAL MARKING INK WITHOUT PREPARATION PREPARED BY THE DAUGHTER OF THE LATE JOHN BOND. 75 SOUTHGATE R. LONDON. W. WORKS. REGISTRATION APPOINTMENT TO THE QUEEN & COURT OF HOLBORN.

DELIVERED IN PARCELS OF 1 DOZEN OR IN PACKETS OF 1 DOZEN

CAUTION I AM DETERMINED TO PREVENT IN ALL CASES EVERY COLOURABLE IMITATION, TO PROTECT MY RIGHTS & PROPERTY

SPECIAL NOTICE.**MRS. BATCHELOR'S HAIR RESTORER.**
COLOR

Having become Sole Proprietor of the above well-known Preparation for the Hair, I beg to inform the Trade that I have established myself at address as at foot, where all Wholesale orders will be executed.

Note the Wholesale Price—8s. per dozen, subject to usual discount.

Special Nett Cash Prices:—1 doz., 7/- per doz.; 6 doz., 6/9 per doz.; 12 doz., 6/6 per doz.

SHOW CARDS AND HANDBILLS SUPPLIED.
ENERGETIC AGENTS LIBERALLY TREATED.

N.B.—It is my intention to shortly introduce a larger size, viz., 2s 6d., which will be more adapted to the Colonial and Foreign Markets.

W. E. MILLARD, Farringdon Road, LONDON, E.C.

Sole Agent for *Graken's Compound Podophyllin Pills*, held in great repute in all parts of India for Liver complaints, so prevalent in hot climates. Can be obtained through all the London Wholesale Houses.

WHITE AND SOUND TEETH.**JEWSBURY AND BROWN'S
ORIENTAL TOOTH PASTE.**

This old-established and increasingly favourite Dentifrice has been Forty Years before the Public. It is warranted to retain its properties and keep in good condition in any climate.

The original and only genuine is manufactured solely by

JEWSBURY and BROWN,
CHEMISTS, MANCHESTER,

and is distinguishable by the Trade Mark, printed in red and green, a facsimile of which is annexed. Particular attention should be paid to this guarantee of genuineness, as numerous imitations are offered.

Sold universally by Chemists and Perfumers, at 1s. 6d. and 2s. 6d.

The Trade and Shippers supplied by the leading houses in London and elsewhere. Bills and Show Cards forwarded on receipt of address card, and directions for enclosure.

F. A. SARG'S SON & CO.'S
CHEMICALLY PURE GLYCERINES
AND
TOILET GLYCERINE ARTICLES.

CHEMICALLY PURE GLYCERINES.

Sarg's Double Distilled Glycerine, Chemically Pure,
30° Beaumé, in Cases of Four 56-lb. Tins each; Twenty 5-lb. Bottles, Fifty 1-lb. Bottles, and 100 ½-lb. Bottles, with Registered Label.

Sarg's Double Distilled Glycerine, Chemically Pure,
In ½-lb. and 1-lb. Bottles, should have a place in every nursery on account of its salutary action on the heads of children, relieving them from dandruff and the roughness of the scalp they are so commonly subject to.

Sarg's Distilled Glycerine, Chemically Pure, P.B.,
29° Beaumé, in Cases of Four 56-lb. Tins each.

Crude Glycerine, in Bulk.

TOILET GLYCERINE ARTICLES.**Transparent Glycerine Soap,**

In registered Packets of three Tablets, 1s. Warranted to contain 33% of the purest Glycerine. Also in round Tablets, three in a Box; and in oval Tablets in paper.

Liquid Glycerine Soap,

Best preventive against chapped hands, 1s., and unrivalled for imparting softness to them, and rendering them clean and white. See Testimonials of Professor J. von Liebig, Baron; and of Professor F. Wöhler.

Scented Glycerine,

In Bottles at various prices. Either pure or diluted with water, this Glycerine is very successfully used for softening the skin, preserving the complexion, and preventing the very unpleasant roughness of the skin in cold weather.

Glycerine Cream

Is quite unequalled for imparting a fresh and healthy colour to the lips and keeping them from chapping.

Sarg's new Carbolic Glycerine Soap,

In Boxes of three Tablets, is highly recommended as a most effective disinfectant.

Sold by all Wholesale Chemists and Druggists.

Sole Wholesale Agents for the United Kingdom and the Colonies:

SCHMEDES, ERBSLOH & CO., 6 CASTLE STREET, FALCON SQ., LONDON, E.C.;

14 MARKET BUILDINGS, FLINDERS LANE, MELBOURNE; 26 O'CONNELL STREET, SYDNEY.

THE UNIVERSAL TOOTHACHE SYRINGE

Retail,
6d. each.



Wholesale,
4s. per dozen.

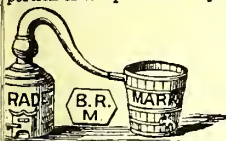
A great improvement upon the "DENTAL SYRINGE," as the fluid is contained in a glass bulb, which enables its contents to be seen, also prevents the liability to evaporation through long keeping or exposure.

THE UNIVERSAL CORN AND WART PENCIL.

1/2 oz. mounted on a handsome Illustrated Show-Card, Retail, 6d. each; Wholesale, 3s. 6d. per doz. It is especially adapted for Export Trade, and may be safely sent to the hottest climates, as each glass tube is hermetically sealed and enclosed in a cardboard case.

N.B.—Both the above are exempt from Stamp Duty by permission of the Board of Inland Revenue.

CONCENTRATED WATERS.—One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the British Pharmacopœia, and free from all Chemical impurity. They are prepared to supply a want long felt by Chemists and Medical Men, and by their use a fresh supply of any of the Medicinal Waters may be obtained at a moment's notice. They are not affected by age in any climate. N.B.—Used in the proportion of one part to thirty-two of water they represent the Medicinal Waters of the United States Pharmacopœia.



	Per lb.		Per lb.		Per lb.		Per lb.
Aqua Anethi, Concent.	4/0	AquaCinnam. Ver. Concent.	6/0	Aqua Fœniculi, Concent.	4/0	Aqua Pimentæ, Concent.	4/0
" Anisi, "	4/0	" Cassiæ, "	4/0	" Mentli Pip. "	4/0	" Rose "	8/6
" Camphoræ, "	4/0	" Flor. Aurant. "	8/6	" Ang. Con. "	6/0	" Rose Virgin "	10/6
" Carui, "	4/0	" Flor. Sambuci, "	8/6	" Virid. "	4/0		

The above are put up in Bottles of 1/2 lb. or 1 lb. and upwards, each of which has the Inventor's Protection Label over cork. Wholesale Agents—Hearon & Co., Maw, Son, & Thompson, Lynch & Co., London; Evans, Sons & Co., Raimes & Co., Liverpool; Mather, Woolley, Manchester; Bewley & Draper, Dublin; Glasgow Apothecaries' Co., Hatrick & Co., Glasgow; Raimes & Co., Edinburgh; Foggitt, Thirsk; Goodall & Co., Leeds; Clarke, Bleasdale & Co., York; McKesson & Robbins, New York. Special terms for large quantities may be had from

B. ROBINSON, Operative Chemist, Distiller and Brewer of British Wines, Manchester.

WOOD STAINS, AWARDS: London and Vienna Exhibitions

IN LIQUID AND POWDER.

Packed in 1-lb., 1/2-lb., 1/4-lb., and 2-oz. Boxes, 1/2-pint 6d. Bottles, and bulk.

Specimen Boards and Circulars supplied when ordered.

MANUFACTURER,

THOMAS S. JACKSON,
199 BOROUGH, LONDON, S.E.

and of all Patent Medicine Warehousemen. Write for New Price Lists of Oil and Spirit Varnishes, Colours, Paints, &c.

WOODS' ARECA NUT TOOTH PASTE.

For Removing Tartar and Whitening the Teeth, without injuring the Enamel. Sold in Pots, at 6d. and 1s. each.

WOODS' QUININE, CANTHARIDINE, & ROSEMARY HAIR CREAM

(WITH GREASE), Restores the Hair if weak or falling off. Price 9d., 1s. 6d. and 3s. 6d. per bottle.

WOODS' QUININE, CANTHARIDINE, & ROSEMARY HAIR WASH

Similar to the above (without grease). Price 1s. 6d. and 3s. 6d. per bottle.

WOODS' DANDRUFF POMADE.

Never fails. 1s. per pot.

Proprietor: **W. WOODS, M.P.S., Chemist, Plymouth.**

SOLD WHOLESALE BY ALL LONDON HOUSES.

ROUND AND OVAL CHIP AND WILLOW BOXES,

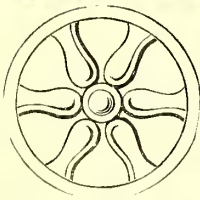
WARRANTED TO STAND ALL CLIMATES,

Of any size, in the very best quality that can possibly be made.

LARGE STOCK KEPT IN LONDON.

Only the Trade supplied.

Every large buyer of these goods should compare my samples and prices before ordering elsewhere.



Please observe my REGISTERED TRADE MARK,

And see that every Parcel bears the same on the LABEL AS GUARANTEE,

As for obvious reasons many bad foreign productions are being brought into the market.

217 UPPER THAMES STREET, LONDON, E.C.

Bankers—London and Westminster Bank, Lothbury, E.C.

JEWENS' CLARIFIED LARD, MARROW, SUETS, AND OILS.

JAMES EWEN & SONS are induced to give further publicity to these articles, the continued demand by all who have used them being satisfactory proof "that where purity of basis" in treatments, &c., is required, they are most desirable.

By their method of purifying, the fats are not chemically altered, but simply divested of all particles tending to decomposition, they are consequently available for the most delicate preparations.

Adeps. Benz. B. P. and Pharm. Lard (vide P. J. Vol. I., p. 8). Direct, "for Cash only," from

JAMES EWEN & SONS' CLARIFIED FAT WORKS,
5 HATFIELD STREET, STAMFORD STREET, S.E.;

or through any of the Wholesale Houses, with their usual credit, at a small advance.

CAUTION.—See that each package bears their label with name and weight.



P. A. STEVENS, CHEMIST AND DENTIST, 70 HYDE ROAD, HOXTON, LONDON, N., Sole Proprietor and Maker of the SILVERY WHITE GUTTA PERCHA ENAMEL for Stopping Decayed Teeth.

REGISTERED—No. 3745. P. A. S. is prepared to supply the above to Wholesale and Chemists, in any quantity, with their name stamped upon each stick, cut any length. To be obtained of all Wholesale Houses. Price List and Samples sent post free. Special Terms to Shippers.

SPECIAL NOTICE.—The words SILVERY WHITE GUTTA PERCHA ENAMEL are registered as a Trade Mark, and will be protected.

TRY IT! SPANISH

In Bottles,

Unrivalled for RESTORING HAIR, RENEWING, CLEANSING, THICKENING, and PREVENTING the Hair

Of Messrs. Low & Haydon, 330 Strand, London; Barclay & Sons, 95 Farringdon Street, London; of any Chemist or Hairdresser; or of A. P. Muddiman, Leighton Buzzard, Beds.



IT NEVER FAILS! WASH!!

2/6 & 5/- each.

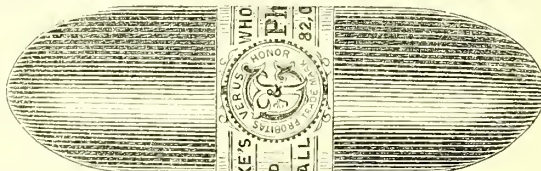
from FALLING OFF or Turning Grey, instantly removing all Scurf or Dandruff, leaving the skin pure and healthy.

DRUGS, CHEMICALS, PHARMACEUTICAL PREPARATIONS.

GABRIEL & TROKE,

Wholesale and Export Druggists and Manufacturing Chemist,
82 CITY ROAD, LONDON.

GABRIEL & TROKE'S REGISTERED CAPSULED HORSE BALLS,



Manufactured solely by GABRIEL & TROKE,
WHOLESALE DRUGGISTS, 82 CITY ROAD,
LONDON.

MANUFACTURERS OF ALL VETERINARY PREPARATIONS, EVERY KIND OF
VETERINARY INSTRUMENTS AND SUNDRIES.

The superior advantages of these Balls are obvious. The mass is confined in a hermetically sealed gelatinous Capsule, perfectly harmless, and immediately dissolved in the stomach. The Capsule will not only prevent the Ball from getting dry and hard, but will preserve its purity and power for a reasonable time, and ensure the effectiveness of the medicine—especially when such drugs as Camphor, Ammonia, or Essential Oils are prescribed. The Capsuled Balls are most convenient and safe, and well adapted for export, keeping good in any climate. They are put up in Boxes of 1 dozen each. Capsuled Balls of the most approved formula on hand, and private recipes faithfully and accurately dispensed. Shipping orders promptly and carefully executed, and at lowest market prices. Price Lists of a very extensive character in the most handy referable style on application.

SAMPLES AND SPECIAL QUOTATIONS FOR LARGE BUYERS.

THE BEST ARTICLES ON THE BEST TERMS.

SEND

A POST CARD WITH NAME AND ADDRESS TO
T. BOWICK & CO., BEDFORD, ENGLAND

For ONE of THEIR PARCELS (Carriage Paid) of FREE SAMPLES and Circulars of their
PATENT BOTANIC FLAVOURER
For Horses, Dairy Cows, Cattle and Stock, and for imparting an aromatic flavour to
Weathered Hay and Damaged Corn. And for their

PATENT SUBSTITUTE FOR MILK
For Calves and Young Animals, which is made simply with the addition of boiling water.

These Articles have only to be introduced to sell, for "once used, always used"
GOODS SUPPLIED THROUGH THE WHOLESALE HOUSES ONLY.

Dr. BILLING'S INSTANTANEOUS DISINFECTANT & DEODORIZER

IS THE MOST RELIABLE AND THE CHEAPEST
IN THE WORLD.

Harmless to furniture and linen. Does not stain. Harmless, colourless, and Odourless, but powerful! It instantly deodorises and disinfects any material it is applied to, no matter how fetid or offensive! Destroys and neutralises instantly all poisonous gases, arrests decomposition, and prevents contagion. Reliable and safe in the sick chamber, the hospital, and for all sanitary purposes.

ONLY ONE QUALITY—THE BEST!

In 1s. and 2s. bottles, sufficient to make two gallons of the best and cheapest disinfectant in the world.
Special prices by the gallon or quantity.

OFFICES AND DEPÔT: 77 CANNON STREET, E.C.

W. S. YATES,
Chemists' Shop Fitter, Shop Front Builder,
and Glass Show Case Maker.

PLANS AND ESTIMATES SUPPLIED FOR WORK IN ANY PART
OF THE KINGDOM.

9 CAMDEN STREET, LIVERPOOL.

ESTABLISHED 1833. HORSES.—LIEUT. JAMES'S BLISTER

CAUTION.

The annexed Label is at the top of every Pot of the ORIGINAL and only GENUINE BLISTER.

The Messrs. Barclay & Sons, Farringdon Street, London, and Messrs. Raimes & Co., Edinburgh, Liverpool and York, are now and have been Agents 45 years.



AGENTS:—Sutton & Co., 10 Bow Churchyard; W. Edwards Son, 157 Queen Victoria Street; Newbery & Son, 37 Newgate Street; Evans, Lescher & Evans, Bartholomew Close; Burgoyne, Burbidges & Co 16 Coleman Street; Lynch & Co., 171A Aldersgate Street; W. Mathe Farringdon Road, London, and Manchester; Tidman & Son, Wilson Street Sanger & Son, 150 Oxford Street; Millard & Sons, 40 Charterhouse Square Corry & Soper, Shad Thames; A. A. Campbell, Leadenhall Street, London Woolley, Sons & Co., 59 Market Street, Manchester; Apothecaries Company, Virginia Street, Glasgow; Boileau & Co., Bride Street, Dublin McMaster & Co., 121 & 122 Capel Street, Dublin; Hunt & Co., 17 Westlan Row, Dublin; Clarke & McMullen, Victoria Street, Belfast; D. Galbraith Londonderry. And by all Chemists, in Pots, 1/6, 2/3, and 5/1.

COLONIAL AGENTS:—MELBOURNE and WELLINGTON: Feltou Grimwade & Co.; SYDNEY, BRISBANE, and LAUNCESTON: Elliott Bros. & Co. DUNEDIN and AUCKLAND: Kempthorne, Prosser & Co.; CALCUTTA: Smith Stanistreet & Co.

R. S. JAMES, 31 Years Sole Manufacturer, STANFORD, FARRINGDON, BERKS
Advertised in "Bell's Life" 45 years. Beware of a Spurious Imitation.

BY ROYAL



LETTERS PATENT.

SPOROKTON

(TUSON'S PATENT),

The best combined Volatile and Non-Volatile

DISINFECTANT,

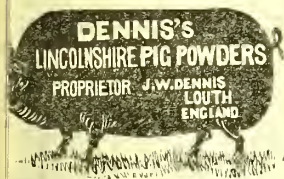
DEODORISER AND ANTISEPTIC. Manufactured by

UTTON & PHILLIPS, STOWMARKET, SUFFOLK.

LONDON DEPOT—WHITE HORSE YARD, 100 HIGH HOLBORN.

CIRCULARS FREE BY POST ON APPLICATION.

DENNIS'S CELEBRATED LINCOLNSHIRE PIG POWDERS



TRADE MARK. NO. 14389.

THESE Powders have now been before the Public for Ten Years. The large and increasing sale, together with the numerous testimonials constantly being received, prove that the public are fully alive to the fact that they are the **BEST MEDICINE** for **DISEASES** to which **PIGS** are subject and are also the best **CONDIMENT** known. They have an immense sale wherever introduced, and the Proprietor is desirous to assist all who will undertake to keep them in stock by supplying them with Show Cards, Posters, and Counter Bills with name and address thereon. They are put up in Penny Powders, each Powder a full dose; but are almost invariably sold in Packets containing Six and Twelve Powders to Retail at Fivepence and Tenpence. Retailers will be charged 40/- per Gross for Fivepenny, and 80/- per Gross for Tenpenny Packets, less usual discount, by

ovenden & Son, W. Mather, Newbery & Son, and W. Edwards & Son, London; Lofthouse & Co., Hull; Raimes & Co., York; Messrs. Goodall, Backhouse & Co., Leeds; or from the Proprietor, **JOHN W. DENNIS, CHEMIST, LOUTH, LINCOLNSHIRE, ENGLAND.**

HORSE, CATTLE, AND SHEEP MEDICINES.



By Special Warrant, Dated 27th December, 1865.

BY ROYAL APPOINTMENT.

DAY, SON & HEWITT,

INVENTORS AND SOLE PROPRIETORS OF THE



By Special Warrant, Dated 10th February, 1866.

ORIGINAL " STOCK BREEDERS' MEDICINE CHESTS,

For all Disorders in Horses, Cattle, Calves, Sheep, and Lambs.

ronised for over 40 years by Royalty, and the principal Stock Breeders, Horse Proprietors, and Agriculturists of the British Empire.

The No. 2 MEDICINE CHEST contains the following matchless remedies:—

- "CHEMICAL EXTRACT," for all External Injuries, and Ewes Lamb'ng.
- "GASEOUS FLUID," for Colic, Scour, or Diarrhoea, and Debility.
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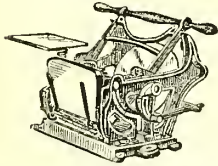
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AND THOSE WHO ALWAYS PRINTED PRINT THE MORE."

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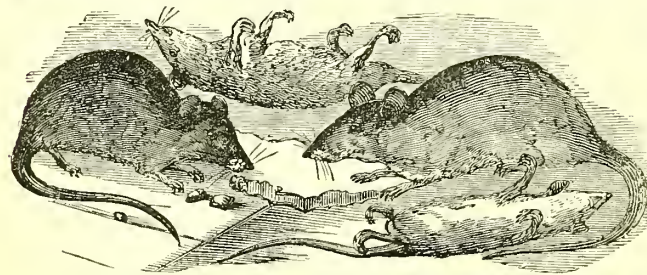
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ESTABLISHED 23 YEARS.

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WHOLESALE ONLY.

BATTLE'S VERMIN KILLER.



{ Mice eat it readily, and Die on the spot.

Has an immense Sale, and wherever introduced never fails to give satisfaction.—Mice appear attracted to it as by magic, eat it readily, tumble over and die on the spot. Rats usually die in their runs.—Parties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

TESTIMONIALS.—Thousands might be published

From Mr. THOMAS COLTON, Agent for Selby.—A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy to-day he called in to say that he had found fifteen dead mice, and had only used part of a packet.—From Mr. EDWARD STURDY, Flemington Mills.—I duly received by post the Packet of your VERMIN KILLER, and found it as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets.—Leeds, November 6th 1857.—I have tried BATTLE'S VERMIN KILLER, and have found it most effectual in clearing my premises of LARGE QUANTITIES OF RATS.—THOMAS S. CROSLAND.—Mr. Stend.

Sold in Packets, 3d., 6d., and 1s. each.

SOLE PROPRIETOR:

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HUNTER'S "INFALLIBLE" VERMIN DESTROYER.

1d., 2d., 3d., 6d., and 1s.

OF ALL THE WHOLESALE HOUSES

Depot:—DEWSBURY.

TESTIMONIALS.

From Mr. Jas. Thompson, Low Heskett, near Carlisle, to Mr. R. T. Paterson, Chemist, Carlisle:—"Sir,—You can with confidence recommend 'Hunter's Vermin Destroyer.' It is the best thing I ever used, having often cleared stack-yards of both rats and mice in a day or two."

From Mr. Edward Thornton, Chemist, Lyme Regis:—"I can bear testimony to the efficacy of your 'Killer.' Parties who have purchased it of me say that it is the best they have tried. Mice are rapidly destroyed by it, and it quite answers the description you have given of it."

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1d., 2d., 3d., 6d., and 1s.

THROUGHOUT THE UNITED KINGDOM.

Established 1846.

TESTIMONIALS.

From Mr. A. Billington, Chemist, Wakefield; August 28, 1878:—"Dear Sir,—Please send me a few of your Vermin Killer Registers. I can bear testimony to the deadly effect of your 'Killer,' having one night laid in my warehouse the contents of a 2d. packet, and found in the morning no fewer than forty dead mice."

From Mr. Geo. Eagle, Merriekville, Sydney, Australia, to Mr. Mitchell, Druggist, Pitt Street, Sydney:—"Sir,—I promised to let you know how 'Hunter's Vermin Destroyer' acted. Its effect was wonderful; in one night it destroyed all the rats and mice about my house, which was swarmed with them."

From Mr. James Froud, Chemist, Dorchester:—"Your poison succeeds to admiration. It is as effective as an 'infernal machine.'"

THE CONDY'S FLUID CO.

FALCON ST., LONDON, E.C.

(A. D. MITCHELL, *Managing Partner*).

Medicinal Uses : Important to Chemists and Medical Practitioners.

The Condyl's Fluid Co. beg to state that their Condyl's Fluid (Crimson) IS COMPOSED OF PERMANGANATE OF POTASH ONLY, in strict accordance with the Patent, and with the Standard Medical and Pharmaceutical Works and all published declarations of composition, and to contradict the extraordinary and mystifying statement made by another manufacturer that 'GENUINE CONDY'S FLUID IS NOT AND NEVER WAS COMPOSED OF PERMANGANATE OF POTASH.'

The Supreme Court of Judicature having settled the question of the Right to Manufacture Condyl's Fluid, Ozonised Water, &c., entirely in favour of Dr. Mitchell, the Company representing his interests beg to call attention to the above statement and to their reduced Trade Prices.

CONTINUED REDUCTION IN TRADE PRICES

THE CONDY'S FLUID CO., FALCON STREET, E.C., maintain the following Reductions in the Trade Prices of their genuine articles, which can always be relied upon as being of full strength and perfect purity:—

CONDY'S PATENT FLUID (Crimson), 1s. size, 6s. per doz.; 2s. size, 12s. per doz.; 4s. size, 24s. per doz.

CONDY'S PATENT OZONISED WATER, 2s. size, 12s. per doz.; 3s. 6d. size, 20s. per doz.

CONDY'S PATENT FLUID (Green), CONDY'S REMEDIAL FLUID, CONDY'S HEALTH POWDER, CONCENTRATED VINEGAR, &c., as before.

LIBERAL TERMS TO WHOLESALE AND EXPORT BUYERS.

B.—In ordering through the Trade, please NOTE THE ADDRESS, FALCON ST., and specify our articles at REDUCED TRADE PRICES, which are listed by all Wholesale Houses less their usual discounts. THEY ARE MADE IN STRICT ACCORDANCE WITH THE PATENT, ARE UNIFORMLY UP TO STRENGTH, free from impurities and sediment, securely corked, and always give satisfaction alike to consumer and to dealer. THEY ARE GUARANTEED BY THE ORIGINAL LABELS OF THE LATE FIRM WITH PRIZE MEDALS AWARDED AT INTERNATIONAL EXHIBITIONS, the unwarranted use of which is a misdemeanor, and the right to which is confirmed to the Company by Decree.

THE CONDY'S FLUID CASE.

FINAL DEFEAT of MR. H. BOLLMANN CONDY.
FAILURE AND EXPOSURE OF THE "TRAP TO CATCH CHEMISTS."

CONDY v. MITCHELL. COURT OF APPEAL, LINCOLN'S INN, Nov. 27, 1877.

LORD JUSTICE JAMES (without needing to hear defendant's counsel) said—That such a suit should have been instituted at all was very remarkable; but that, after the learned Vice-Chancellor's judgment, this appeal should have been brought on was particularly strange. Dr. Mitchell had obtained his right by payment of a substantial money consideration, and CONDY'S FLUID AND CONDY'S OZONISED WATER WERE AS MUCH HIS PROPERTY AS THE PLAINTIFF'S. Having that right, Dr. Mitchell was entitled to set up the Condyl's Fluid Company.

LORD JUSTICE BAGGALLAY was of the same opinion. The style of the partnership had been "Bollmann Condyl & Co.," and the plaintiff set up in his own name of "H. Bollmann Condyl." It was not necessary to consider whether he might have been restrained from so doing; but he came into court with a very bad grace. To get evidence HE HAD RESORTED TO WHAT WAS, IN FACT, A TRAP TO CATCH CHEMISTS.

LORD JUSTICE THESIGER was also of that opinion; and especially as to the character of the plaintiff's evidence. A good deal of seemed to him not admissible at all.

LORD JUSTICE JAMES: APPEAL DISMISSED WITH COSTS.

ROBERT GIBSON,

MEDICATED LOZENGE MANUFACTURER

CARLTON WORKS, HULME, MANCHESTER, AND 1 FINSBURY CIRCUS, LONDON,
 MAKER BY STEAM POWER OF MEDICATED AND HIGH-CLASS LOZENGES OF EVERY KIND
Boiled Sugars, of the Finest Quality, Packed for Home or Export.
 Fragrant Bouquet Lozenges, 100 in an Ounce, have an immense sale

SUGAR WORM CAKES,

Keep in any Climate, give great satisfaction, and have an increasing demand, especially in Africa and Australia. Put up in
 Tins, each containing 6 Dozen or 12 Dozen Cakes.

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 BURNING NAPHTHA at Market Prices.
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Book of Drawings and Prices sent free on application. Apply at 48 Commercial Street.

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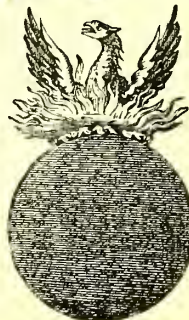
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WHITE LEAD, PAINTS,
 OF ALL

Soft Soap, Greases, Linseed
 PAINTS IN TINS

TRADE
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COLOURS, AND VARNISHES
 KINDS.

Meal, and Crushed Linseed.
 MIXED FOR USE.

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All Colours in 1, 2, 4, and 7 lbs.

VARNISHES OF ALL SORTS IN TINS OF ALL SIZES.

THE


Cheapest **CONDY'S FLUID** of All.

CONDY'S FLUID RED,	1s. size,	4s. per doz.
" " "	2s. " "	8s. " "
" " "	4s. " "	16s. " "
CONDY'S OZONISED WATER,	2s. " "	8s. " "
" " "	3s. 6d. " "	12s. " "

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R. CONDY & CO.'S articles are made in strict accordance with the Patent, are of uniform strength, and quite free from sediment.

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ANTISEPTIC DISINFECTANT for Preventing Epidemics and Destroying Infectious Diseases, as supplied to the Royal Arsenal, Woolwich. This Fluid is a powerful Antiseptic, Disinfectant, and Deodoriser, and from its harmlessness may be applied in any direction without any ill effects, and with the best possible results. THE "PRINCESS ALICE" CALAMITY.—The Sanitary Fluid was used at the Woolwich Dockyard for Disinfecting over 600 Bodies. The Clothing taken from the Bodies and over 500 Sheets were also Disinfected in large Caudrons, also the Building, Yards, &c., giving the greatest satisfaction to the Dockyard and Parish Authorities. The work was carried out under the superintendence of Mr. HARMER.

TESTIMONIAL.—"H.M. Dockyard, Woolwich, September 23, 1878. SIR,—I beg to inform you that I consider your Disinfectant as applied in the Dockyard both to buildings and clothing after the removal of the dead from the premises, very efficacious, and, from its cleanliness and absence of smell, very superior to the Disinfectants in the form of powder generally used.—Faithfully yours, J. T. BARRINGTON, Assistant Commissary General. Mr. Harmer, Stratford, E." For Asylums, Schools, Sanitary Authorities, Railway and Dock Companies, Workhouses, Shipping, Stables, Cowhouses, Cattle in transport, &c. Price 1/ per bottle; 3/6 per gallon; large quantities at a cheaper rate, of the Sole Manufacturer, W. J. HARMER, West Ham Lane, Stratford, E., or through Agents.

The MAGIC FLUID for General Household Purposes, price 1/6 per gallon. Write for Pamphlet, with Testimonials, &c. NON-POISONOUS.

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For Home, Foreign, and Colonial Markets.

Wholesale only.

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FITCH & NOTTINGHAM, Leech Breeders,

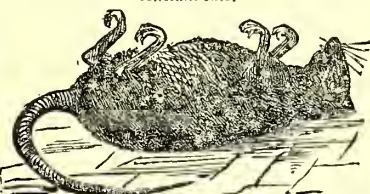
MARSEILLES, & 55 PENTONVILLE ROAD, LONDON, N.

All Orders by Post receive immediate attention.

100 Rats destroyed for a Shilling by BARBER'S PHOSPHOR PASTE.

WRAPPED NEATLY FOR THE COUNTER. Handsome attractive Posters supplied; if conspicuously placed will command constant sale.

Kills Rats, Beetles, &c. THE DEAD VERMIN DRY UP WITHOUT SMELL.



Guaranteed the best destroying Paste in the world.

3d., 6d., 1s., 2s. 6d., and 5s. Tins. Also BARBER'S VERMIN KILLER. SOLD THROUGHOUT THE WORLD.

Kills Mice upon the spot. In packets, 3d., 6d., and 1s. Be not deceived with worthless imitations. Observe the Name!!!

Testimonial from Her Majesty's Ratcatcher. "Hampton, Middlesex, May 25th, 1870.—I have been more than forty years employed at Hampton Court Palace, the Royal Stables, and other buildings in and around the Royal Parks, for the destruction of rats, mice, and other vermin, and after trying all the rat poisons which I have heard of, I now use BARBER'S PHOSPHOR PASTE and VERMIN KILLER, with which alone I am able to keep these ancient palaces and national works free from vermin. (Signed) CHARLES SHONES."

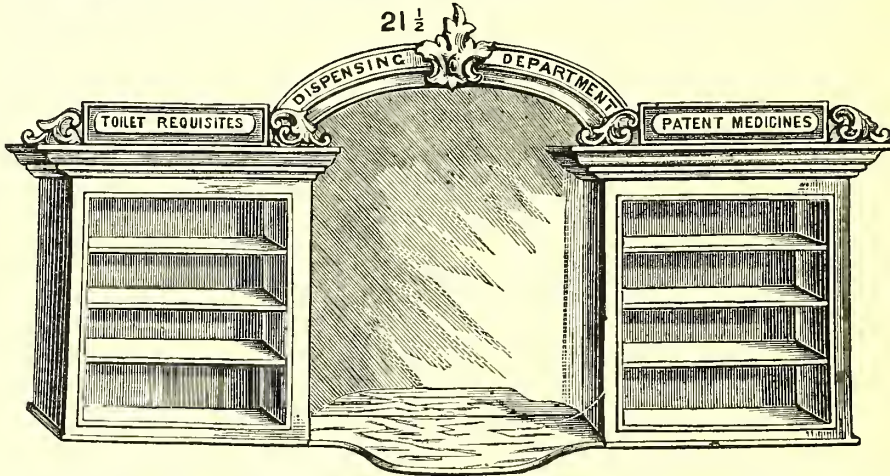
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AND MANUFACTURER OF DRUGGISTS' SUNDRIES,
15 St. PAUL'S SQUARE, BIRMINGHAM.

This Case is made of choice Mahogany, with Mirror in centre, and is lined at back with Black Enamelled Leather Cloth; it has Plate-Glass Shelves, Glass Knobs on the Doors, a Marble Slab in the Centre, and is fitted with Three Shelves at back. The Case is 6 feet high, 29 inches to cornice, 33 inches to top of tablets, and 30 inches to top of centre mirror.



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SECOND-HAND FIXTURES OF ALL KINDS BOUGHT AND EXCHANGED.

R. T. will wait upon parties fitting up, to plan and advise. 2nd-class fare only charged.
FOR SALE, FIXTURES FOR SHOP, ABOUT SIXTEEN FEET BY TWELVE. WRITE FOR LIST.

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The CHEMIST AND DRUGGIST for March 15
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OF

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GREAT BRITAIN.

Early application should be made to secure
extra space.

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WHITE GLASS VIALS, Long, Medium, or Short
 Series— $\frac{1}{2}$ 1 2dr. $\frac{3}{4}$ 1 $\frac{1}{2}$ 2 3 4oz.
 2/8 2/8 3/ 2/3 3/6 4/3 5/3 6/3 7/3 gr.
 Stoppered—15/ 15/ 15/ 17/ 18/ 18/ 19/ 22/ 24/ ..

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 3/3 3/6 4/3 5/3 6/3 7/ 8/ 11/ 15/ 18/ 20/ 23/ gr.
 Stop'd—17/ 18/ 18/ 19/ 22/ 24/ 30/ 30/ 36/ 36/ 48/ 48/ ..

BEST WHITE FLINT OVALS, accurate measure, suitable for either Dispensing or Perfumery—
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 $\frac{3}{4}$ 1 $\frac{1}{2}$ 2 3 4 6 8oz.
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 Fitted with Box Tops— 13/ 15/ 20/ 24/ 28/ 30/ 33/ ..

LONG NECK LAVENDER BOTTLES—
 $\frac{2}{8}$ $\frac{3}{10}$ $\frac{4}{11}$ $\frac{6}{12}$ $\frac{8oz.}{13}$ gross.

GLASS MEASURES, accurately Graduated—
 4/6 5/6 8/ 8/ 9/6 11/ 13/ 14/6 16/ 18/ 24/ gr.

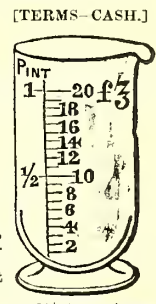
CASTOR OIL BOTTLES, Deep Blue—
 $\frac{1}{5/6}$ $\frac{2}{7/}$ $\frac{3}{8/6}$ $\frac{4}{9/6}$ gross.

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 $\frac{3}{7/6}$ $\frac{4}{7/6}$ $\frac{6}{8/}$ $\frac{8}{12/}$ 16oz. 15/ gross.

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 White Glass, 12/ gross; fitted complete. Bent, 6d., 39/ gross; 1/ 57/ gross; with Box Tops, 30/ gross.—
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All Fittings for Feeding Bottles sold separately and at very low prices.

POMADE BOTTLES, fitted with Box Caps—2oz., 12/ 3oz., 16/ 4oz., 18/ gross.
Special Quotations given for any kind of Bottles.



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TREBLE & SON'S NEW SHOW ROOM,

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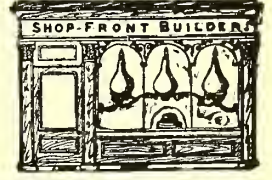
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ESTABLISHED 1830.

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A few Minutes' Ride by Omnibus from the Bank.



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- N. Nicholson, Canonbury, London.
- &c. &c. &c.
- Messrs. Leath & Ross, St. Paul's Churchyard, London.
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Cabinet Fitter to the Pharmaceutical Society of Great Britain. Manufacturer of every description of Air-tight Glass Show-cases for Chemists, Jewellers, &c. Medical Labelling, &c.

Plans and Estimates for Entire Fittings and Alterations supplied.

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DRUGGISTS' SUNDRIESMAN,



Manufacturer of Court Plaister, Goldbeaters' Skin, and Surgical Plaisters, Surgical Instruments and Medical Glass,

LONDON AND MANCHESTER.

**MATHER'S
"PRINCESS" FEEDING BOTTLE**

"Unique in shape, and possesses advantages over all others."

Fitted with Boxwood Corks, 3/6 per doz.; Black or Red Fittings, 4/3
 " " Earthenware Caps, 7/0 " " " " 8/0
 " " Screw Cap and
 Valve . . . 12/0 " " " " 13/0

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CLOUD RESPIRATOR**

Strongly recommended by the Medical Profession for protecting the Mouth and Nostrils in damp, cold, and foggy weather, and for its Simplicity, Lightness, Cleanliness, Elegance, and Cheapness. The "CLOUD RESPIRATOR" will be found particularly valuable to persons exposed to sudden changes of temperature, or on leaving heated rooms.

Price, 8/0 per dozen.

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(As supplied to the Army and Navy at Seantai Hospital.)

Stamped Long Shape . . . 1/6, 2/3, 3/0, 4/6, 6/8 per doz.
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(No Preparation or Heating required.)

Extract from the *Lancet*, January 5, 1878:—"We can recommend this as a very good and convenient marking ink. We have submitted linen marked with it to some of the most powerful of chemical agents, including acids, alkalis, and chlorine, and cyanide of potassium, and have found that it was very much easier to destroy the linen than the marking upon it; in fact, the writing could not be effaced by any of the agents we employe it." Price, 3/6, 7/0, 18/0 per doz.

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Cachou lozenges 7/0 per gross.
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February 14, 1880.

SCALE OF CHARGES FOR ADVERTISEMENTS.

Whole Page, £5. Half Page, £2 15s. Third Page, £2. Quarter Page, £1 12s. Sixth Page, £1 5s. Eighth Page, 18s.

Special Rates for Wrapper and pages preceeding and following Literary matter, also pages facing inside of Wrapper. The above Scale of Charges will be subject to a discount of 10 per cent. upon 7 and 20 per cent. upon 13 insertions, prompt quarterly payments.

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All Advertisements intended for insertion in the current Month must be sent to the PUBLISHER OF THE CHEMIST AND DRUGGIST on or before the 12th, except Employers' and Assistants' Advertisements, which can be received up to 10 A.M. on the morning previous to publication.

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IMPORTANT NOTICE.

WE have great pleasure in informing our friends and the Trade in general that we have taken into Partnership our late Manager, Mr. EDWARD JOHNSON (who has been connected with the firm for the last twenty-five years), and Mr. THOMAS JAMES LATIMER, who is so well known as our senior representative.

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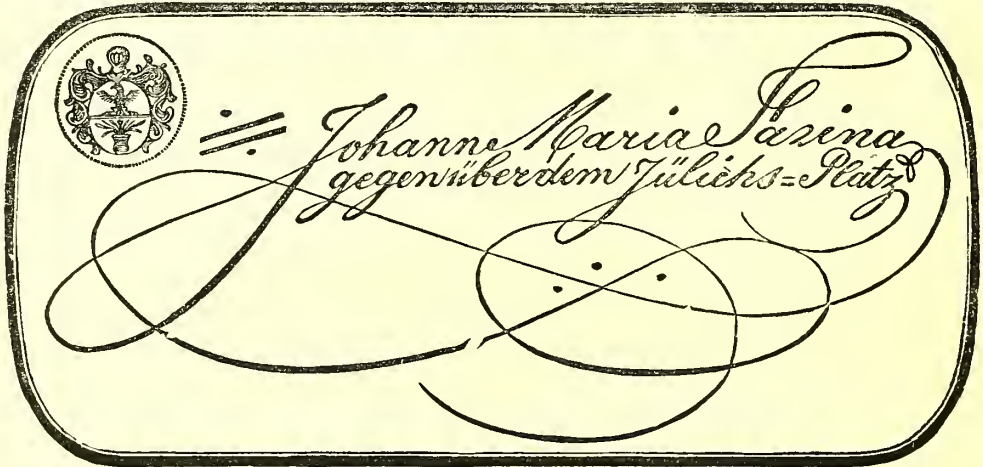
By appointment, Sole Purveyor to Her Most Gracious Majesty Victoria, Queen of Great Britain & Ireland; Their Royal Highnesses the Prince and Princess of Wales; William, King of Prussia;



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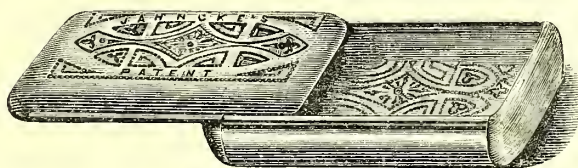
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WORSHIPFUL COMPANY OF CUTLERS OF THE CITY OF LONDON, MAY 1879.

FIG. 1.

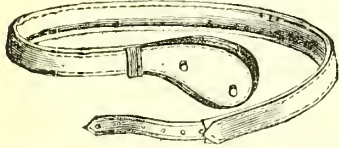


FIG. 4.

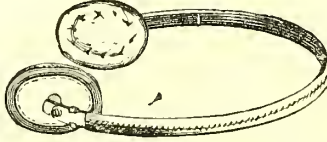
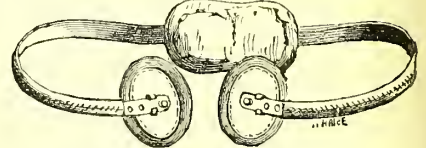


FIG. 5.



TRUSSES.

Circular Trusses, single, as Fig. 1, basil and chamois or basil and moleskin	per doz.	£1 1 0
Circular Trusses, double, basil and chamois or basil and moleskin	per doz.	1 14 0
" " with extending backs	" "	2 14 0
Salmon & Ody's Expired Patent, single, Fig. 4	" "	1 10 0
" " double, Fig. 5	" "	3 0 0
Noc-Main Lever, single	each	0 8 0
" " double	" "	0 13 6
Coles's Expired Patent, single	" "	0 5 6
" " double	" "	0 10 6
Scrotal Trusses, basil and chamois or moleskin, single	" "	0 4 0
" " " " double	" "	0 7 0

SUSPENSORY BANDAGES.

No. 1. Cotton Bags and tape under-straps	per doz.	0 8 0
2. Cotton Oxonian, with drawing-strings	" "	0 10 0
3. Silk Bags and tape under-straps	" "	1 1 0
4. Silk Oxonian, with drawing-strings	" "	0 18 0
5. " " Bags bound with elastic	" "	1 4 0

SUSPENSORY BANDAGES—continued.

No. 6. Silk Oxonian, superior quality, bands of buff jean, with drawing-strings	per doz.	£1 4 0
7. Silk Bags, to button on, with tape under-straps	" "	1 1 0
8. " " " " under-straps to button	" "	1 4 0

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Sto-kings pair	£ 9 0	£ 13 6	£ 5 3	£ 6 6
Knee-caps "	0 6 0	0 9 6	0 3 6	0 5 0
Calf-pieces "	0 6 8	0 9 0	0 4 0	0 5 6
Socks "	0 5 0	0 7 6	0 3 3	0 4 8
Wristbands "	0 2 0	—	0 1 6	0 2 0
Knee Stockings "	0 15 0	1 3 0	0 8 9	0 11 6
Belts, to draw on each	0 15 0	1 1 0	—	0 9 0

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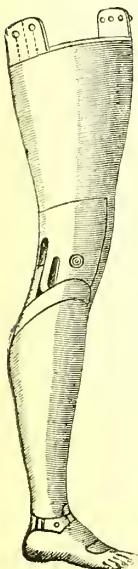
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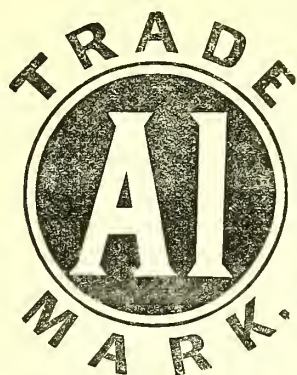
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See "CHEMIST AND DRUGGIST," December 15th, 1874.

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An index to the advertisements, and the terms for insertion, will be found on page 41.

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The Trade Association has prosecuted unqualified dealers in poisons at Newcastle, Leeds, and Birmingham during the past month, and has obtained convictions in each instance. In two Birmingham cases the defendants were using the names of chemists living, one at Denbigh the other at Stratford-on-Avon, apparently with the consent of the latter, but these attempts to evade the Pharmacy Act by the *prête-nom* system, as is often done in France, did not succeed.

The Pharmaceutical Society has successfully prosecuted at Birmingham, under the 15th Section of the Pharmacy Act, one of the persons who had previously been prosecuted by the Trade Association under the 17th Section. It ought to be clearly understood that no one except the Pharmaceutical Council can prosecute under the 15th Section. In the interests of the trade they ought to exert themselves in this direction to a far greater extent than has been the case hitherto.

The subject of the abuse of narcotics has been brought prominently before the public during the past month. Where exists, it appears, a widespread notion that while azors, rivers, and rope should be always accessible to persons of suicidal or murderous tendencies, the sale of poisons should be guarded with ever-increasing strictness. The same journals, however, which worry themselves into a fever of indignation about the reckless sale of narcotic

medicines think it monstrous if we ask that the wholesale distribution of medicines by co-operative stores should be checked by law; and the sincerity of their talk about the value of human life may be estimated from their exultant leading articles over wars and rumours of wars. We are not, however, disposed to defend the reckless sale of poisons, and we believe that the Pharmaceutical Society could and should do much more than it has yet done to carry out the provisions of the Pharmacy Act in this respect.

A Bill has been laid before the Jersey States for the registration of chemists and druggists duly qualified in accordance with the provisions of the English Pharmacy Act. Out of 16 persons practising as druggists on the island, only three are said to possess more than the simplest qualifications.

Our Correspondent travelling through India furnishes us, amidst other interesting matter relating to pharmacy in India, with particulars of a movement, originating at Agra, for obtaining a Pharmacy Act for India. He also sends us a drawing of a drug store at Benares, which, with its luxurious surroundings, seems well calculated to make home druggists envious of their Eastern brethren.

A deputation from the Pharmaceutical Council waited on Mr. Farrer at the Board of Trade, to explain to him the misunderstandings of the Weights and Measures Act, which seem to possess several inspectors. The Board of Trade, it appears, cannot instruct the inspectors direct, but Mr. Farrer suggests that the Pharmaceutical Council may draw up a statement of their complaints, to which the Board will reply officially, and he thinks that such a document would have weight with the erratic inspectors. Surely the official mind might have discovered a more roundabout method than this. Could not a new department have been established, with the express object of confusing inspectors, and another to correct them?

There are 242 more names on the register of pharmaceutical chemists and chemists and druggists of this year than in that of last year. The total number is now 13,551, 2,299 being pharmaceutical chemists and 11,252 chemists and druggists. The “members” of the Pharmaceutical Society are 30 fewer than last year, though the associates and apprentices have increased by much more than that number.

A question arose, at the last meeting of the Pharmaceutical Council, whether chemists and druggists who are not members of the Pharmaceutical Society have a right to describe their establishments as “pharmacies.” The Secretary and several members of the Council seemed disposed to give the Society the benefit of the doubt, but they ultimately agreed to submit the inquiry to the Solicitor. If his reply should be unfavourable to the claim it will probably be disclosed in committee. We believe the term “pharmacy,” as applied to a chemist’s shop, was first an adaptation from the French, by whom it has been so used for centuries; and that, except in very rare instances, there has been no deliberate intention to pretend to a qualification not possessed.

In our report of the Chemical Society’s meetings some interesting facts will be found. Dr. Prevost has found by experiment that rain dissolves very much more solid matter from soil in which no seeds have been sown than in cropped earth. Mr. Warrington suggests a useful hint in recommending chemists to make their benches and other woodwork impervious to acids by heating them and then rubbing in paraffin.

Dr. Whitla, of Monaghan, has been elected on the Irish Pharmaceutical Council in place of Mr. William Allen, deceased. Sir Dominic Corrigan, the first President of the Irish Pharmaceutical Society, died on the 1st inst.

According to Mr. A. H. Allen, Sheffield can probably manufacture diamonds if Glasgow has failed. Life will lose its charms for the belles and beaux of society if they are to suffer a monthly scare in this style about their precious stones.

Edison's new electric lamps are still one stage short of perfection. There appears to be a difficulty in maintaining the vacuum. The inventor is at work on the leak, and hopes soon to be finally successful. Meanwhile the shares in his company, which have been up to \$3,500, are now quoted at not much over \$1,000 for \$100 originals.

The sale of arsenical paper-hangings was last month brought under the notice of the Society of Arts by Mr. Henry Carr, and a general wish was expressed for an Act of Parliament to check such sales. We have suggested elsewhere that these might be prevented by the application of the sale of poisons clauses of the Pharmacy Act without any additional legislation.

According to the statistics published by Mr. Richard Seyd, F.S.S., it appears that 96 chemists and druggists failed in 1879, which was exactly the same number as failed in 1878. The total number of failures in the year was rather greater than in 1878, but a considerable improvement was manifest in the latter months of the year.

Messrs. Ferris & Co., the old-established chemists of Bristol, have startled their *confrères* in that city by suddenly reducing their retail prices to co-operative store levels, and even below. They are advertising in the local journals, and have circulated 21,000 price-lists to the families of the district.

The Chesterfield chemists have considered the desirability of reducing prices for patent medicines, but have preferred not to do so. A well-drawn-up statement of their reasons appears among our provincial reports.

Certain Sheffield chemists have been attacked, as we mentioned last month, on a rather large scale by the Inland Revenue authorities. Some of them seem to think it especially hard that they should be fined for sales of one or two pennyworths of medicine. We have not a full acquaintance with the facts, but we do not think there is any reason to suppose that the Board of Inland Revenue have taken a new departure in any sense. They have always allowed the sale of any medicines unstamped in which the disease to be cured is only intimated as an adjectival part of the title. But if property is claimed in such title, or if these medicines are recommended by handbill or advertisement, the indulgence referred to is thereby sacrificed, and the medicine, whether it be a pennyworth or ten shillings' worth, requires a medicine stamp of the due amount. A Sheffield firm ask in our correspondence columns for co-operation in an attempt to abolish the medicine duty altogether on quantities—say not exceeding 4*l*. It seems to us that such a demand would be useless, and would almost be equivalent to abolishing the medicine stamp altogether, as it would afford too great facilities for evasion. A more reasonable request would be for two new stamps—say ½*l*. for three pennyworth or under, 1*l*. for six pennyworth or under, and the rest as now existing.

The case of Von Heyden *v.* Neustaft (the manufacturers of salicylic acid) came on in the Court of Appeal on Monday last, but was postponed in consequence of the other engagements of the Attorney-General. It is very probable that the appeal of the defendants in the case of the Pharmaceutical Society *v.* The London and Provincial Supply Association will be heard towards the end of this month.

ADOLPHUS FREDERICK HASELDEN.

ON Saturday, February 7, Mr. Adolphus Frederick Haselden was buried at Highgate Cemetery. The weather was not propitious—indeed the sky was as gloomy as the occasion.

Mr. Haselden was a good and honest man, one who, while never attempting impossibilities, did the work which lay before him in a sensible, careful, and generally successful manner.

He was an illustration of how an individual, apart from conspicuous ability, may obtain an honourable position, and reap the reward of a consistent life.

The name of Mr. Haselden appears on the original list of associates in 1842, and he became a member of the Pharmaceutical Society in 1855.

The death of Mr. Jacob Bell left a vacancy in the office of President and one member of Council. On July 6, 1859, Mr. T. N. R. Morson was called to the Presidential chair, and Mr. Haselden was elected on the Council. From that date for many years consecutively he served upon that Board.

In 1869 he was chosen Vice-President, and upon the resignation of Mr. Sandford, in 1871, he became President which office he held until his retirement from the Council in 1873. It thus happened that on two occasions he received official distinction in a somewhat unexpected manner.

On presiding for the first time at an annual general meeting (May 17, 1871) he observed: "Gentlemen,—Two months ago I little expected that I should on this day have the honour and pleasure of addressing you from this chair." Sudden, however, as had been his election, he made not only an appropriate address, but a very good president into the bargain. It was a stormy and uncomfortable period, when the proposed poison regulations were eagerly discussed, and opinion on both sides ran high. Mr. Haselden took an active share in the work and arrangement of the examination system. He was examiner, with slight intermission from 1864 to 1877, during which period, though he preferred botany and materia medica, he did not confine himself to any particular department; and he rendered acceptable aid in determining the number of marks allotted to each candidate. He paid special attention to the framing and definite construction of the preliminary examination when it ceased to be *vivâ voce* and assumed a more official character.

Mr. Haselden was at one time a very frequent contributor to the pages of the *Pharmaceutical Journal*, and discoursed on things pharmaceutical in an agreeable and instructive manner. Being himself a Latin scholar, he was fond of insisting upon the value of a classical education to the pharmacist; and being also familiar with the French language he turned this acquirement to account in many of his communications. These literary efforts appeared in rapid succession, and will still be recollected with pleasure. Amongst his longer papers may be mentioned the series of the "Codex and the British Pharmacopœia Compared" (1864). The introduction was read at an evening meeting, the remainder appearing in journal form as original articles.

His "Notes on the British Pharmacopœia of 1864" were issued in a small volume, and were meant rather as explanatory remarks than as a criticism on the newly-published work. Of his general contributions the one on "Names in General, Pharmacopœial and Pharmaceutical in Particular" (July 13, 1859), may be quoted as a fair specimen of the writer's style and composition.

Following the example of many of his brethren in pharmacy, Mr. Haselden sought and obtained admission as Fellow of the Linnean Society, and he was a diligent attendant at the Thursday evening meetings at Burlington House.

While the Council were assembled on Wednesday, February 4, a message was received that Mr. Haselden, their former president, had died that morning. A resolution was immediately proposed by Mr. Atkins, seconded by Mr. Savage, and unanimously supported, in which the sincere sympathy of the Board was conveyed to Mrs. Sharp, the sister of the deceased gentleman, at the loss she had sus-

ned. At the same time, the resolution conveyed the assurance of the high esteem in which the late Mr. Haselden was held by the Council for the valuable services which he had rendered to pharmacy, and especially for the efficient manner in which he had performed his various official duties.

At the funeral, besides some members of the family of the deceased, Professor Redwood, Messrs. T. H. Hills, T. Greenish, Jas. Bremridge, J. B. Barnes, R. Hampson, J. Robbins, and Joseph Ince followed him to the grave.

We can scarcely do better in estimating the career of Mr. Haselden than quote a passage from his own writings, the spirit of which he conscientiously followed to the letter. (December 8, 1856.) "A liberal education, a fair share of natural abilities, a good stock of perseverance, a no mean quantity of patience, and a reasonable amount of capital, are indispensable to a profitable and prosperous career: without these, few attain even mediocrity, and with them, little more than moderate compensation for outlay; but one word more: having chosen your vocation, strive to make the best of it; if it be not so profitable or so brilliant as your fancy pictured it; if the sunny side be the exception and not the rule, endeavour, at least, to be content."

J. I.

Pharmacalia.

THE GRAPHS.

THOSE who of late have been practically engaged in written examinations must have gained some experience in the working of the various "Graphs" which are just now in fashion. There is the Chromograph, the Papyrograph, the Copygraph, and sundry other combinations all meaning the same thing—namely, a method of using a coloured ink which when dry can be readily transferred to a paste of suitable consistency, from which 20 or 30 fair transcripts can be obtained. Considerable care is requisite in order to get an *unsmeared* result; but, however unfortunate may be the appearance of much domestic manipulation, every pharmacist should be able to be quite successful in the process. The details are as follows:—Take 1,200 grains of pure glycerine and 500 grains of gelatin, to which add subsequently a little barium sulphate, enough to colour it white. Pour a little boiling water on the gelatin in a beaker. Put the beaker in boiling water and heat until the gelatin is entirely dissolved, and, consequently, of a uniform thickness. Take this gelatin solution, carefully noting that it is quite smooth, and pour it into a large evaporating basin. Add the glycerine by degrees in proportion of about three-fourths at a time; boil the composition well, with constant stirring, until mixed. To this mixture add a weak solution of barium sulphate of the consistency of milk, and the requisite whiteness having been obtained, pour the whole into a flat tin placed on a level surface. Nothing answers better than the cover of a tin jujube-box, the size of a large sheet of note-paper. All air-bubbles should be removed with a glass rod; a little practice will almost prevent their formation, which is due to hasty pouring. Leave the tin till the composition becomes quite set, and when used wash the surface evenly with hot water, and "sluice" afterwards with cold water.

Different proportions of gelatin and glycerine have been suggested, and probably answer well—the above quantities have often been used with success. The mass so made resembles the jujube paste as sold in sheets, whitened by the barium salt. It absorbs aniline inks; the best for the purpose being violet. Place the sheet of paper, writing downwards, on the composition; gently but firmly smooth it over the moist gelatinised surface by hand-pressure, and rub so as to bring it well into contact. Remove the paper slowly

from the top, downwards, observing whether any portion may have missed the action of the ink, in which case gently rub for a second the faulty space upon the composition, and thus remove the whole. The printing-press is now ready. Fresh paper is laid, sheet by sheet, upon the writing, the hand gently rubbed in a circular manner over the back, and a clear copy is thus produced. Repeat as long as the original will give complete copies, or as copies may be required. Finally, when done, wash the composition with cold water and a sponge, and reserve for future use. Copying-ink may be bought at any good stationer's at a cheap rate; but the press itself is sold at a fancy price.

A MODEL LABORATORY.

Late in the autumn of 1879 there was a solemn inauguration of the Chemical Laboratory at Geneva. The local authorities, professors of the university, many distinguished men of science, and students assembled at the installation of the magnificent structure destined for chemical instruction, under the presidency of M. Carteret.

M. Raoul Pictet, well known for his experiments on the liquefaction of gases, has recorded his impressions on the subject. Describing a visit to the new school, he says that on entering by the grand staircase which leads to the vestibule, one is reminded of a palace; but should we wish to gain a just idea of the place we must begin underground and finish by the attics.

First, there is an immense boiler, made at Winterthur by the Brothers Sulzer, which distributes steam and hot water throughout the establishment. This feeds all the warming apparatus, and sets in motion the big ventilator placed at the base of the main chimney. A smaller boiler does duty in the summer. A second speciality consists in an electro-magnetic machine, Gramme's system, with hydraulic motor of four-horse power. This instrument communicates the electric current to the laboratories, and in any direction where its action may be utilised. Just above this machine department, which may be described as cellarge, the true basement premises extend over the whole area, and are partitioned off into different lecture-rooms. Some are assigned to Professor Graebe for his courses on technical chemistry and industrial research, with special laboratory; others are assigned to Professor D. Monnier, who presides over biological chemistry; and here is a room devoted to vivisections and practical experiments in toxicology. In furtherance of this object there are wired cages in which some hundreds of frogs are kept, martyrs in the cause of science. Mounting from the basement to the ground-floor, the whole of the left wing is devoted to general chemistry, under the superintendence of M. Graebe; accommodation is specially provided for 16 students to work out researches in organic chemistry. It is claimed as an advance upon ordinary arrangements, that a perfect and continuous system of fume chambers are in immediate connection with the main central chimney; and that a room conveniently opening into the chief vestibule is adapted to operations which involve the employment of hydrogen sulphide.

Each student has hot water, steam and gas at his command; an ingenious contrivance allows him to distil in vacuo; and precautions have been adopted to prevent accidents arising from explosive gases—this class of dangerous experiments being conducted in special chambers, and with protected apparatus.

An automatic regulator limits the consumption of gas to the quantity required for obtaining any definite degree of heat. The drying-room, contiguous to the laboratories, is lined by rows of rectangular compartments of various sizes, in which chemical products may be placed and subjected to

a temperature bordering on 100° C. Between the metallic sides of these compartments steam may be passed so as to raise the temperature to nearly that of boiling water. They are provided each with doors which may be hermetically closed or left open as desired.

In short the question of improved mechanical appointments has been carefully studied throughout the arrangements. The largest of the numerous laboratories upon the building (for there are several) is that devoted to analytical chemistry, under Professor D. Monnier. Accommodation is provided for 48 students. Its appearance is described as striking, and it can be lighted up at night, being intended for evening as well as for morning study. Adjoining this laboratory are rooms entirely fitted for spectroscopic analysis and the art of photography.

Experiments involving the escape of noxious gases may be made at will in a gallery protected from the rain, but still in the open air.

Two rooms are devoted to microscopic observations, micro-chemistry having become almost a distinct branch of science. Two lecture amphitheatres are placed at the disposition of the professors—that on the left is reserved for M. Graebe, for general chemistry; that on the right for M. D. Monnier, for special chemistry. The first is the larger, and can seat 150 students, the benches rising in tiers one above the other, as at Paris. This lecture amphitheatre is in direct communication with the laboratory of M. Michaud, who is the head demonstrator, or to give him his official title, *préparateur du cours*.

An extreme advantage is thus gained in the facility with which needful experiments may be in readiness.

The smaller amphitheatre, assigned to M. D. Monnier, will seat 60 students. The architects of this fine establishment are Messrs. Bourrit & Simler; and this rapid sketch will certainly convince the English reader that Geneva has made an energetic movement in the direction of chemical teaching. The ancient city may be congratulated on having engrafted on the traditions of the past the fresh impulses of modern enterprise.

MICROSCOPY.

A liberal amount of commendation may be extended to the Publication Committee of the Royal Microscopical Society for the manifest improvement in the character and appearance of their Journal and Transactions. This bi-monthly publication has almost reached the size and dignity of a review, and there are two noticeable departments to which attention may be directed. In addition to the report of the meetings of the Society, each number contains a classified index in English to the contents of upwards of 300 British and foreign scientific Journals and Transactions. This index, under the heading "Bibliography," forms a reference to current researches relating to invertebrata, cryptogamia, and microscopy in general.

"The Record," which precedes the index, and which in the December issue extends to 114 pages, consists of abstracts of, or extracts from, the more important of the articles noted in the bibliography. An attempt has thus seriously been undertaken to ascertain what is being done by biologists of this and other countries. The feeling has been (to quote a remark of the editor, Dr. Crisp) that whilst the annual records published at home and abroad are invaluable as books of reference beyond anything to which a bi-monthly journal could attain, a more readable account of the results of research would be useful, and, if possible, one not so much out of date. The enormous labour of compilation has hitherto deterred many from this task, and consequently three responsible assistants in editorial work have volunteered that aid which was indeed indispensable. In acknow-

ledgment of the excellence of the work done we may subjoin the names:—Messrs. T. J. Parker, lecturer on biology at Bedford College, London; A. W. Bennett, M.A., lecturer on Botany at St. Thomas's Hospital; and F. J. Bell, professor of Comparative Anatomy at King's College. Recollecting, as we do, the unsatisfactory character of the original journal of the Microscopical Society, and the personalities with which its pages were disfigured, it is with sincere pleasure that we contemplate the transformation which it has recently undergone.

MEDICAL STUDENT PLUS HERO.

The medical student is popularly supposed to be an individual who seeks a refuge from sorrowful actualities in excitement and dissipation. The charge is to a great extent untrue, and it will be allowed that there are splendid exceptions.

Georges Herbelin, of the Hôpital St. Eugénie, who a few weeks ago was carried to his grave with well-deserved marks of respect, has by his personal conduct exalted the character of his race.

This young man, whose courageous devotion to the sick had won the admiration of the hospital authorities, caught diphtheria while attending a little girl suffering from that malady.

All the skill of the doctors failed to save him. Before dying, however, the brave young student had the satisfaction of receiving the Cross of the Legion of Honour, a distinction which he had richly merited.

The funeral was attended by M. Lepère, Minister of the Interior; M. Hérold, Prefect of the Seine; several municipal councillors and leading physicians. A detachment of infantry rendered him military honours. Additional interest surrounded the event from the fact of the deceased's father having died in precisely the same way. Life is not to be measured by the size but by the perfection of its circle.

The Pharmaceutical Council.

WEDNESDAY, FEBRUARY 4, 1880.

PRESENT.—Mr. Schacht, Vice-president, who, in the absence of the President, occupied the chair; Messrs. Atkins, Bottle, Churchill, Fraser, Greenish, Gostling, Hampson, Hills, Mackay, Richardson, Rimmington, Robbins, Shaw, Squire, Symes, Savage (in the vice-chair).

MINUTES.

THE Minutes of the last meeting were read, and the Council went into Committee to consider a private question therein referred to. On resuming the minutes were confirmed.

LOT FOR NEXT COUNCIL.

RETIRING MEMBERS.—The following members of the Council retired by rotation:—viz., Messrs. Gostling, Greenish, Hills, Mackay, Sandford, Schacht, and Slipper.

The following retired by ballot:—viz., Messrs. Atkins, Frazer, Hampson, Rimmington, Savage, Squire, and Symes.

The members remaining in the Council by ballot were Messrs. Bottle, Churchill, Richardson, Robbins, Shaw, Williams, and Woolley.

ELECTIONS.

The election of members, associates, and apprentices then took place.

RESTORATIONS TO THE REGISTER.

The Council considered individually a number of cases for restoration to the register, and after discussion on each person's application it was determined, that Messrs. W. H. Evans, of Battersea, and A. T. Roberts, of Brighton, should be restored to their former status in the Society, on payment of their subscriptions and the fines imposed in each case." The persons so restored were eight in number, and paid fines varying from 5s. 3d. to 21s.

REGISTRATION.

The Secretary reported four applications to be placed on the register, and was about to read the terms of the applications with a view to their discussion, when

A member proposed that the Council should go into committee to consider the cases.

Mr. Symes thought this course was wholly unnecessary. In all probability nothing would arise beyond routine business, and he considered that until something of a more important character cropped up the matter might be dealt with in an open council.

Mr. Mackay coincided with Mr. Symes' view, and ultimately the proposition for going into committee was withdrawn.

Mr. Rimmington inquired if it was an undoubted fact that all the names placed on the register were perfectly satisfactory and *bona-fide* cases.

The Secretary said he should not think of placing names on the register unless they were such as Mr. Rimmington indicated; he had ever used the utmost care in such cases, and as a matter of fact in one particular case the Council itself had determined to admit a man's name to the register quite contrary to his wish (laughter); he had long rejected that man's application, and would even now like to see the name expunged. The Secretary then proceeded to read some correspondence he had had relative to a magistrate having signed a chemist's certificate on insufficient knowledge of the case. A considerable amount of conversation was held on the subject, Mr. Rimmington stating that he knew of the case himself where a magistrate confessed to signing the paper *pro forma*, without any direct evidence that the person was actually in business. Mr. Bottle mentioned another case. Mr. Robbins considered the better plan would be that in all such cases the Secretary should write to some authority in the locality, and so satisfy him self that the person applying was really in business. This suggestion was endorsed by some other members.

REGISTRAR'S REPORT.

The Secretary then proceeded with a statement of the comparative numerical strength of the Society for the five years 1875 to 1879, an analysis of examinations, &c. The number of candidates for the preliminary examination during the past year was 1,474, against 1,130 in 1878, and the number of successful candidates was 783 last year, against 538 in the year previous. The percentage of failures was represented by 46.88 last year, while in 1878 the figures were 51.27. Last year was the first occasion on which candidates were tested in translating English into Latin, and it was thought that many failures would result. It was an extraordinary and gratifying fact, however, that out of 176 candidates only 17 failed in Latin. There had been an increase of numbers of pharmaceutical chemists and chemists and druggists on the register during the year of 242, and the totals on December 31 were:—Pharmaceutical chemists, 2,999; chemists and druggists, 11,252; total, 13,551. There was in 1875 a total of 1,823 pharmaceutical chemists subscribing members; but in 1879 the numbers had fallen to 1,742. Of chemists and druggists who were subscribing members there were 835 in 1875, and 812 last year. The number of associates in business had increased in the period under review, being 576 in 1875 and 965 in 1879. Apprentices and students had also multiplied during the same period, and were represented by the numbers 852 in 1875 and 1,071 last year.

Mr. Bottle considered that the Secretary had laid a very succinct and clear illustration of the present position of the Society before the Council, and he thought that the position was a very satisfactory one. The number of pharmaceutical chemists in the Society was decreasing, but it was decreasing at a much less rate than had been the case some years previously. As a set-off to this he was pleased to observe that the number of apprentices had considerably increased. This fact was, to him, eminently satisfactory, as showing that young men were freely coming forward and identifying themselves with the Society. It was undoubtedly to such persons an interest to join the Society; they would do good and get good by so doing. He (the speaker) had for many years taken a deep interest in the welfare and

progress of the Society, and some long time ago—as many of the Council would probably remember—he made an elaborate calculation as to how long it would take the Society, at the rate of decline then existing, to die out altogether. The figures which had just been laid before them, and the prosperity which they indicated, had, however, completely set his calculation aside, and it now appeared as if he would himself die out much sooner than the Society—a sequence which he was glad to see accrue.

After further conversation it was agreed—"That the Registrar's report be entered on the minutes, and published in the Journal."

REPORTS OF COMMITTEES.

Finance.

The Chairman believed it was consistent with recent alterations for the Council to go into committee to receive the reports of committees. Some dissent having been expressed, the resolution of the former meeting was referred to, and the Chairman said he was glad to find that it was only necessary to resolve into committee in the event of private or personal matters coming forward.

A recommendation from the Finance Committee, *re* renting a particular house at 45*l.* per annum, led to some discussion, and it was ultimately agreed to leave the matter to the judgment of the Finance Committee, a motion that the report and recommendations of the body be received and adopted being carried.

House.

The Secretary explained that the house porter having been absent for some time through illness, and on his convalescence being compelled to sleep out of the house by lack of accommodation, the Committee recommended that various alterations (as specified) be made in the laboratory, so that a suitable sleeping quarter might be provided for the porter's use. Many members of the Council agreed that it was desirable the porter should sleep in the house, and it having been shown that the proposed alterations would necessitate an outlay of 10*l.* only, the Council determined to leave the matter to the discretion of the Committee. The report and recommendations of the House Committee were then formally agreed to.

Benevolent Fund.

The Council next considered various applications for annuities, and a considerable amount of discussion occurred as to the *bona fides* of one of the annuitants. The members of the Council made sundry suggestions for ensuring against a misappropriation of its funds. The matter was ultimately confided to the judgment of the Secretary, and the sum of 55*l.* was voted amongst the annuitants.

Library, Museum, and Laboratory.

The Secretary read a statement of the number of visitors to the museum and laboratory during the month.

The question of admitting medical students to the museum was mooted, but quickly adjourned.

The circulation of books during December was—Town, 118; country, 58; total, 206. The circulation during the year was—Town, 723; country, 755; total, 1,478.

The Chairman was pleased to know that the museum was widely appreciated, and in important quarters.

The reports and recommendations of the various committees were then agreed to.

General Purposes.

The Council resolved itself into committee to consider the report of the General Purposes Committee.

DEATH OF MR. A. F. HASELDEN.

The Secretary reported that he had received a communication from Mrs. Sharp, of Croydon, stating that Mr. Haselden, a former president of the Society, had died that morning. Thereupon a general conversation ensued upon the late president's services to the Society, and it was decided that the matter should drop for the moment. Later on the subject was resumed.

Mr. Atkins, after speaking in terms of the greatest admiration of the deceased gentleman as a man, a pharmacist, and as president of that Society, moved:—

That this Council, having heard of the death of Mr. Haselden, desires to express to Mrs. Sharp, the sister of the deceased gentleman, the most sincere sympathy for the loss which she has sustained, and at the same time to convey to her the high esteem in which the late Mr. Haselden was held by the Council for the valuable services which he rendered to pharmacy, and especially for the efficient manner in which he performed the duties of president of this Society.

Mr. Savage expressed sentiments identical with those of Mr. Atkins, and seconded the motion, which was agreed to *nem. dis.*

NOTICE OF MOTION BY MR. SAVAGE.

Mr. Savage proceeded to move the motion standing to his name. It was in these terms:—

That motions made to go into committee of the Council be adopted or rejected without a discussion, beyond an explanation from the mover as to his reasons for doing so.

He said: The motion I have read to you requires no explanation on my part. I thought that by moving this we might be able to save much talking. Any gentleman on moving that we go into committee may or may not state the cause which he deems sufficient for so doing. I think I need add nothing further, and I therefore beg to move the motion.

Mr. Shaw said: I have much pleasure in seconding the motion. I think that at the last meeting of the Council I made an observation that it would devolve on some member of the Council to move, when any case involving some private matter came forward, that we go into committee; and when I saw this motion on the agenda paper I determined to second it. I think that our proceedings ought to be fully reported—or, at least, as fully as possible. But I object somewhat to the manner in which it is done, and when we find that some matter which ought to be private is likely to come up, members should have the power to simply say yea or nay to its being public.

Mr. Symes opposed the motion *in toto*. He said: While I sympathise with Mr. Savage's intention—that of saving time at Council meetings—I cannot at all follow him in his recommendation. When any gentleman states to the Council his special reason why any particular question should be discussed in committee, as a rule we accept his judgment, and forthwith go into committee. But I should be sorry to see a resolution passed to compel us to do this. I prefer that it be always left a matter for judgment. At the last meeting a gentleman wished to make a remark for our enlightenment, and suggested that we should go into committee, but when I afterwards heard his statement I certainly regretted that we were in committee. Now we may be troubled by this thing being constant if we resolve to this effect. I see no necessity whatever for the resolution, and I think that the difficulties likely to be incurred will be greater than those that now exist.

Mr. Hampson also took a counter view. He said: I must oppose this resolution for this reason, that it is quite unnecessary. Hitherto we have not tied our hands in any way, and questions might arise when it would be desirable in the interests of the Society that we should discuss the propriety of going into committee. This Council might be at some future time so constituted that the majority might desire to shirk discussion—I hope it never may—and be disposed to hide themselves under the veil of the Committee. Now this is objectionable, and therefore this resolution should not pass. I believe that the common-sense in this chamber is a sufficient guarantee that when it is desirable to go into committee we should do so. But I object to unnecessary restrictions, and I believe that this is unnecessary, and our experience does not show it to be desirable.

Mr. Squire said: I cannot agree with the last two speakers that it will take up more time. It seems to me that when a motion is made to go into committee, it does not bind us. Those who do not want to do so may say so, and we shall not then waste three-quarters of an hour in discussing it.

Mr. Gostling said: I shall vote for the motion of Mr.

Savage, for it would save time if an explanation were made by one who knows a reason for going into Committee, and after having made the explanation, I think the Council should decide without discussion.

Mr. Maekay said: I take it that anyone making this motion will make a few remarks in explanation, and I cannot conceive how the members of this Council will be bound to accept the motion without discussion, seeing they have the power to vote which way seems best to them, to go, or not to go into committee. If Mr. Savage removes the power to vote then I shall dissent, but when the question is put to the vote it will be in our hands either to decline or agree.

Mr. Hills: I am sorry I cannot vote with Mr. Savage. I should like to see the same thing obtain which we have always had—when we hear the opinion of one and another person in regard to whether we should or should not go into Committee. I think it is objectionable to bind the Council with such a resolution as this.

Mr. Bottle: I should much prefer to feel that this matter was left in the unwritten law of the Society. I see this objection in it—that the mover of the motion to go into committee may have a very weak reason for doing so, while some one else may have a very strong reason for not doing so, and if this resolution were passed he would be excluded from voting.

Mr. Atkins: It strikes me that the resolution is a harmless one, but still I cannot support it. I think that we need not dread the result either way. I believe, however, that it is placing too much power in the hands of the gentleman who moves the resolution. But a still greater difficulty than that has not yet been referred to. I hope that the difficulty which is at the back of all this will by-and-by be removed, and that reporting will be placed on more satisfactory grounds.

Mr. Frazier briefly expressed dissent from the motion, but was not distinctly heard.

The resolution was then put, the votes being:—

For	..	..	..	..	..	..	..	..	..	6
Against	..	..	..	..	..	..	..	..	..	8
Majority against	..	..	..	..	..	..	..	..	..	2

WEIGHTS AND MEASURES.

The Secretary drew the attention of the Council to the resolution passed at the last meeting to the effect that a memorial be presented to the Board of Trade to urge the adoption of an uniform practice of stamping weights and measures. In pursuance of that resolution a suitable memorial had been drawn up (the document was handed in), and had been duly presented to the Board of Trade. The Secretary had received a reply thereto from Mr. Farrer, appointing the following Friday for an interview with a deputation from the Council. Accordingly, the President, Mr. Williams, Dr. Paul, and Mr. Bremridge, jun., waited on Mr. Farrer, and discussed the matter, and he (the Secretary) suggested that as Dr. Paul was in attendance, he should be invited into the Council-room to make a statement. The Council concurred with the suggestion.

Dr. Paul attended, and the Secretary read the report which had been drawn up. The report stated that

“The deputation submitted to Mr. Farrer various readings of the Act as regards apothecaries' weights and measures in different districts—*e.g.*, that in one district the inspector had declared that only measures full to the brim could be stamped, thereby ignoring all graduations on glass measures. In another district the inspector had decided that glass measures cannot be stamped unless made partly of glass and partly of metal. Another inspector had refused to verify 6, 8, 12, or 16 oz. measures, or anything above 20 oz. A 20-oz. measure would simply be marked 1, 2, 3, 4, 5, 10, 20 oz., only seven lines on each.

“That there was a discrepancy in the rate of charge in different districts for verifying graduations.

“The deputation urged the importance of uniformity in all districts, and the consequent necessity of all inspectors being in possession of similar apparatus for testing weights and measures, with certain instructions as to their use.

“Mr. Farrer replied that the Board of Trade had no power to issue detailed instructions as to carrying out the Act of Parliament; it could only advise the local authorities.

“He was anxious for uniformity, and suggested that the

points in doubt should be embodied in a memorandum addressed to the Board of Trade. The Board would give the matter full consideration, and send such a detailed answer as might have great weight with the district authorities."

In reply to interrogations from various members of the Council, Dr. Paul said:—Mr. Farrer stated that the Board of Trade had no power to take action; the only course open to them was to advise such local authorities as applied to them for assistance; hitherto very few such local bodies had applied; the whole matter was, therefore, practically in abeyance. If it could be shown to the Board of Trade that individuals found the new measures to be practically injurious to their trade it would be a good point gained.

Mr. Mackay hereupon remarked that he believed that the Council could influence the Board of Trade a great deal, and that possibly the Board might be induced to issue circulars to all local authorities with the requisite instructions to inspectors.

Dr. Paul said Mr. Frazer had suggested that some plan might be arranged for the Council to address itself directly to the local authorities, and so influence inspectors.

Mr. Greenish inquired whether the inspectors did not receive their instructions from the Board of Trade?

Dr. Paul: No; not at all.

The Chairman observed that the result of the deputation appeared to be to this effect: that Mr. Farrer, speaking with the authority of the Board of Trade, was prepared to receive from the deputation or from that Society a statement of grievances or objections, and as far as possible they would give a distinct opinion on those points for the guidance of any that applied for advice.

Dr. Paul replied that Mr. Farrer reduced the points at issue to three, viz., the difference of opinion that had been met with as to procedure; the way in which the Act affects persons in the practical exercise of their business; the question of charge—an established scale of charges. Dr. Paul then retired.

Mr. Bremridge, jun., as a member of the deputation, corroborated the statements of Dr. Paul, and remarked that the impression left on his mind was that the Board of Trade were absolutely passive in the matter.

The Chairman proposed that as the matter had previously been placed in the hands of a sub-committee, it should now be referred back to them to deal with.

Mr. Hampson did not think a sub-committee competent to deal with the question; it should be referred to the General Purposes Committee. It appeared to him that when the Legislature passed an Act, it should be such a one as would be of use, else they should leave the matter alone. Yet here was an Act that was practically inoperative. There had been no end of worry at the Council concerning the matter, and now that an Act was passed it was found to be merely a permissive one, and not at all compulsory.

Mr. Robbins said that since the last meeting he had had a series of the new measures sent him to order, and, having tested them, he found they were utterly unfit for practical use by chemists.

Mr. Hampson would move that the matter be referred to the Law and Parliamentary committee. It was, however, ultimately agreed to appoint a committee to consist of the President, Vice-president, and Messrs. Greenish, Squire, Hills, Hampson, and Williams.

PARLIAMENTARY PAPERS.

The Secretary reported a communication from the Editor of the Journal explaining that some little difficulty arose at times from the want of a complete set of parliamentary papers. The partial supply existing hitherto was insufficient, and he therefore requested that the usual vote of 2*l.* 10*s.* be augmented to 16*l.* 7*s.*

The matter was referred to the Library and Museum Committee.

THE RIGHT TO USE THE WORD PHARMACY.

A letter was read from Mr. Edward Smith, hon. secretary for Torquay, asking for an official opinion as to whether a "minor" had a right to use the word "Pharmacy" or "Pharmaceutical Laboratory."

The Chairman remarked that the Council was asked to

give its official opinion on a point of law. He did not think the question wrong, but it was quite within the discretion of the Council how to deal with it.

Mr. Hampson moved that the matter be referred to the General Purposes Committee for consideration.

Mr. Squire seconded the motion.

Mr. Robbins moved as an amendment that the matter be at once referred to the Council's solicitor.

Mr. Fraser seconded.

A discussion ensued as to whether Mr. Smith referred to a definite case. The secretary said he knew very well the case to which Mr. Smith alluded. The secretary also said that Mr. Flux had previously given an opinion that members only could assume connection with the Society. Mr. Rimmington remarked that that opinion did not cover the present case. The secretary said that the question was an important one, as many who passed the Minor did not go on for the Major, and if they were allowed to imply that they were pharmacists that would detract from the dignity of the higher qualification.

Mr. Hampson withdrew his first proposal, but moved as an amendment to Mr. Robbins' motion:—

That before obtaining the opinion of the Solicitor on the question of law, the case of infringement be brought before us and investigated.

The amendment was seconded by Mr. Squire.

The amendment, on being submitted, was negatived by a majority of 4. The motion of Mr. Robbins was then carried *nem. con.*

SALE OF NARCOTICS.

The Council then went into Committee on the Sale and use of narcotics, and at the end of the discussion rose for the day.

Metropolitan Reports.

POWELL'S BALSAM OF ANISEED SUSPECTED.—On February 4 Dr. Hardwicke held an inquiry at the St. Pancras Coroner's Court relative to the death of Alice Harrison, aged 13 months. She was suffering from a slight cold, and the mother gave her three doses of Powell's balsam of aniseed. She was taken ill, and died soon afterwards. Dr. Rogers said that death was due to acute bronchitis, which he thought was accelerated by the injudicious use of narcotic medicine. The jury returned a verdict in accordance with the medical evidence, adding that they were of opinion that the use of Powell's balsam of aniseed, being of a narcotic nature, was injudicious in a case of acute bronchitis.

A JURY ON POISONOUS PATENT MEDICINES.—At an inquest held by Dr. Hardwicke on January 22, at St. Pancras, on the body of a surgical instrument maker named John Macham, the jury returned the following verdict:—"That the deceased committed suicide by poisoning himself with chlorodyne, being at the time in an unsound state of mind. The jurors are further of opinion that the most stringent measures ought to be enforced to prevent the sale of poisons in the shape of patent medicines, and that, at all events, it should be made compulsory that a label should be affixed thereto bearing the word 'Poison,' as was compelled to be done in regard to the sale of laudanum and other poisons."

Provincial Reports.

BRIGHTON.

OBTAINING A RECEIPT BY FALSE PRETENCES.—A singular action was tried in the Brighton County Court last week. Dr. Barker, a medical practitioner in that town, sued the trustees of the late Major Barry for 13*l.* 12*s.* The defendants paid 10*l.* into court, the sum for which the plaintiff had already given a receipt in full of all demands, but had subsequently returned. The evidence showed that the defendants had represented that Major Barry had died insolvent, upon which Dr. Barker consented to take the sum of 10*l.*, as he was informed that unless he contented himself

with that amount he would get nothing. After giving a receipt for that sum, however, Mrs. Barry called upon him, and in the course of conversation he related what had occurred. She indignantly repudiated the insolvency of her husband, and Dr. Barker at once returned the 10% to the trustees, and claimed the amount for which he had originally rendered his bill. The Judge ruled that the plaintiff, under the circumstances, was not bound by the receipt he had given, and ordered a verdict to be entered for him for the full amount claimed.

CHESTERFIELD.

THE PATENT MEDICINE QUESTION.—A meeting of retail chemists of the above town was held at the Star Hotel on Tuesday evening, January 27, to consider the advisability of lowering the present charge upon patent medicines. Mr. H. Oldfield occupied the chair. For some years past a "cutting" firm of grocers has sold patent medicines at list prices, but in accordance with a decision arrived at about three years ago, the chemists have still continued to charge the full price. This meeting was called in consequence of several of the other grocers having intimated their intention of taking the matter up in self-defence, if the chemists did not do so. After considerable discussion, several compromises being suggested but not accepted, a resolution was passed unanimously that the full price be still charged for the medicines, and it was agreed that this resolution should be considered mutually binding, unless a general notice be given of a desire upon the part of any chemist to withdraw from it.

An amicable interchange of views upon other trade questions closed the proceedings.

As it may not be uninteresting to record the arguments *pro* and *con.*, held at the meeting upon the question, we subjoin them in a tabulated form.

Question or Statement.

If the other grocers take up patent medicines, will it not do more harm to chemists than the sale being confined to the firm as at present?

But supposing that this branch of the trade slipped away from the chemists' hands altogether, a fear of which was expressed by Mr. Abraham in the last number of THE CHEMIST AND DRUGGIST?

Could not a compromise be effected, as suggested by Mr. Abraham, by charging 1s. for a 1s. 1½d. article, 2s. 6d. for a 2s. 9d. one, and so on?

Could not a compromise be made by selling the most common articles, or those which can be bought the most cheaply, at the list price, and the most unusual ones at the regular price?

If, as you affirm, the system of underselling patents is little better than giving change for a shilling, how is it to the advantage of this firm of grocers to continue it?

Would it not be possible, by reducing the present prices, to so increase the turn-over as to make the profit equal to that obtained at present prices with the limited turn-over?

Answer.

The present firm have been so pushing, that already nearly as much harm has been done as is possible, the greater portion of the chemists' trade in those articles being done in the half-hour interval between the time of the grocer's closing and that of the chemists'.

Better let it do so than perpetuate a system which would be little better than giving change for a shilling.

No; that portion of the public which would go to another shop to save 4d. would certainly do so to save 2d. or 3d.

Such a compromise is better in theory than in practice. The public could not be expected to keep in their memory a list of those articles you did sell at list price and those which you did not, so the doubt would soon be solved by the "cutting" shop being patronised, where no such distinction was in force.

The sale of patents is really a "draw" for other things, e.g., cheap tea. To meet them upon their own ground, the chemist would have to sell packet tea, coffee, &c., at cost price.

The opinion of many chemists in large towns who have tried it is decidedly adverse to such a conclusion; and if the profit were only equal, the increased labour, time, &c., involved in the sale would turn the scale in favour of the present prices. Further, if the prices are once lowered, it is generally admitted that whether the experiment succeeded or failed, there would be no possibility of reverting to the present prices again.

BRADFORD.

FIRE.—On January 15 a fire broke out on the premises of Messrs. Hemingway & Son, dry-soap manufacturers, Trafalgar Street, Bradford. The firemen were soon on the spot, and

had no difficulty in extinguishing the flames. The amount of damage is roughly estimated at 2,000*l.* or 3,000*l.* Messrs. Hemingway are partly insured. The fire, it is supposed, originated in the cellars, in which fire-lighters are manufactured from sawdust and resin.

DONCASTER.

ALLEGED RECKLESS SALE OF MORPHIA.—On January 14 an inquest was held respecting the death of Leonora Hattersley, of Brierley, near Barnsley. The deceased had been in a weak condition for several years, and came to Doncaster for change of air. During her illness she had been in the habit of taking morphia, sometimes taking as many as three draughts in one night, and on arriving at Doncaster on January 12 her sister went to Mr. Hopper's shop, in Cleveland Street, for a sleeping draught. She said it must be strong, and asked the assistant to put 10 grains of morphia in each draught. He said half a grain would kill a man in some instances, and declined to make up the quantity asked for, but as she stated that her sister had taken as many as 10 grains before, he consented to make up a preparation containing five grains to each dose. There were two labels on the bottle, one stating that the preparation was to be used with care, but no instructions as to the quantity to be taken, the other stating that it was labelled poison in compliance with the Act of Parliament. A dose was given to the deceased at eleven o'clock, but she could not go to sleep, and was very restless. After having a little brandy and water she vomited, and appeared a little better, but as she could not fall asleep she took another dose of the mixture. She then dozed off to sleep, and while asleep appeared to have a fit similar to one she had had before, and her hands and lips turned blue. As she did not get better, her sister became alarmed and sent for a doctor. She seemed to be in a fit from seven in the morning to eight at night, when she died. Next morning her sister went to the chemist's shop and told the assistant her sister was very ill, adding that he was not to blame, and that she believed she should have asked for chloral hydrate instead of morphia. At the adjourned inquest on January 19, evidence was given by Mr. Allen, of Sheffield, the borough analyst, that the mixture supplied to the deceased's sister contained five grains of morphia to the ounce, and that there were six ounces of the mixture in the bottle. The jury returned a verdict that death was the result of morphia poisoning, on account of misadventure on the part of the sister and carelessness on the part of the druggist, not, however, amounting to manslaughter.

DUBLIN.

THE IRISH PHARMACEUTICAL COUNCIL.—The vacancy caused by the death of Mr. Wm. Allen was filled up by the election of Dr. Whittle, of Monaghan, brother of the late Dr. Whittle, a member of the Council. Mr. Wm. Allen, jun., whose election we had anticipated in the place of his late father, was not a candidate.

GLASGOW.

GLASGOW CHEMISTS AND DRUGGISTS' ASSOCIATION.—The fourth meeting of the session was held on February 4, Mr. A. Kinninmont, F.C.S., president, in the chair. The paper of the evening was a critique by Mr. J. A. Clarke, on the address of Dr. A. Buchanan recently delivered in Glasgow to the medical students on alcohol. Mr. Clarke discussed the functions of alcohol as a food and as a medicine, urging that it should be used only in the latter capacity. A discussion followed and a vote of thanks to Mr. Clarke concluded the proceedings.

LEITH.

ACTION FOR DAMAGES AGAINST A GALVANIST.—Sheriff Hallard has issued an interlocutor in the case wherein John McLay, sawyer, Bangor Road, Leith, sued D. Rintoul, Giles Street, Leith, for 150*l.* in name of damages for injury to his arm. The pursuer had been stabbed in the right arm, in consequence of which his forearm and hand became paralysed and devoid of sensation. He consulted the defender as to the application of galvanism or electricity for restoring the use of the arm, and was assured of a rapid cure. He allowed the defender to apply galvanism by means of a gal-

anic battery, and in the course of the treatment the injured limb, it was alleged, was placed in a vessel of boiling hot water, and allowed to remain there for about half an hour, with the result that when taken out the tissues were found to be destroyed, and, mortification ensuing, amputation had to be resorted to. His Lordship found for the pursuer, and, in consideration that the hand and arm were previously in a damaged condition, thought 10% and expenses sufficient compensation.

LITTLEDEAN.

A CASE DISMISSED.—Silas Coleman, a chemist and apothecary, of Cinderford, was charged on remand at the Police Court on January 9, "that unlawfully and feloniously, with intent to procure the miscarriage of a certain woman named Eliza Hillman, he did cause to be taken by the said Eliza Hillman certain noxious things for the purpose of procuring her miscarriage at the township of East Dean, in the month of September." At the outset of the case, Sergeant Ford, the prosecutor, stated that the woman would be unable to attend for a week. Superintendent McRae having conferred with the justices, stated that he desired to withdraw the charge, and therefore he asked that defendant might be released from custody. The defendant urged that an adjournment might be ordered to enable him to prove his innocence. The bench considered this undesirable, and the chairman said the bench were of opinion that whilst the police would have been wanting in their duty had they taken no notice of the case, the justices thought it right to say that Mr. Coleman left the court without any prejudice upon his character.

LIVERPOOL.

REDUCTION OF PRICES OF PATENTS, &c.—The Committee of the Registered Chemists' Association of Liverpool have issued to the members the following circular in reply to Mr. John Abraham's pamphlet. The circular is dated February 5, 1880:—"Dear Sir,—In the matter of reduction of prices of proprietary articles by Messrs. Clay & Abraham, the committee took as prompt an action in the direction of maintaining the interests of the trade as the circumstances permitted. The general meeting of September 1 fully endorsed this action, and the expression of opinion was as strong as it was general, that such disturbance of established and reasonable prices was unwise and injurious; and that such a concession to the competition of persons outside of our business, whose purpose is sufficiently obvious, was a degradation. Mr. Abraham's pamphlet containing his reply to our last communication following up the action of the general meeting has doubtless been received by you. We do not feel that any fresh light is therein afforded, or the case made better. The facts remain that, giving away half the profit, twice the business must be done, and twice the outlay incurred to obtain the same amount of return; and that we have the burden of keeping a variety of articles that are rarely required, whilst these outside competitors only keep those that are of ready sale. We trust that the firmness of determination expressed at the meeting of the trade will be carried out by all its members, and that this last element of anarchy will not be permitted to spread amongst us.—We are, dear sir, yours faithfully, Alfred Redford, President; Charles Symes, Vice-President; Benjamin Dickins, Hon. Secretary.

MAIDSTONE.

POISONED BY SHEEP DIP.—The *Maidstone Journal* says a painful sensation has been caused in the neighbourhood of Benenden by the death of Mr. Mark Boorman, who occupied Great Nineveh Farm, and of his little son, aged two-and-a-half years, from taking, in mistake for sulphur, some powder which contained arsenic. At the inquest the jury returned a verdict that the deceased was accidentally poisoned. It was stated that the powder is used in sheep-dipping.

MANCHESTER.

A SILVER WEDDING.—On the evening of January 15 a brilliant company, numbering about 240, assembled in Hulme Town-hall, Manchester, by invitation of Mr. Robert Gibson, medicated lozenge manufacturer, to celebrate his silver wedding. About 7 P.M. 116 ladies and gentlemen sat down to dinner in the large hall, which was tastefully decorated for the occasion with hot-house plants, pier-

glasses, devices of flags, &c. After doing full justice to Mr. Gibson's lavish hospitality and the accustomed toasts, the company received the toast of the evening, "The Health of the Host and Hostess," with enthusiastic acclamation. Mr. Gibson, in responding, spoke for a time with evident emotion, and expressed the pleasure it gave him to have sitting by his side his maternal ancestor to rejoice with him on so auspicious an occasion. Referring to his business career, he paid a graceful tribute to his wife for the never-failing support which she had at all times given him. He owned to a sense of pride as he referred to his son, and also to his employes, some forty of whom were his guests, and who, he was proud to consider, were also his friends, and concluded by thanking those ladies and gentlemen who had honoured him by coming all the way from Scotland and other distant places to be present at this celebration. After dinner, lounge, card, smoke, and refreshment rooms were thrown open, and while whist and the "noxious weed" found devotees, the more youthful portion of the company found the large hall well adapted for dancing, which was kept up with much spirit till an early hour. During the evening Mrs. Gibson distributed to each guest a portion of a monster bride-cake, which had formed a conspicuous table ornament.

NEWCASTLE.

UNINTENTIONAL SUICIDE BY CARBOLIC ACID.—An inquest was held on January 20 on the body of Angus Phillipps Mursells aged four years, who died on that day from the effects of poison at the house of his mother, Mrs. Fanny Mursell, widow, 10 Hawthorn Street, Newcastle. Some carbolic acid had been brought into the house for destroying beetles, and the bottle containing it was placed temporarily on the floor of the kitchen. The child, who had been playing about, drank some of the contents. He soon became insensible, and died next day. Verdict, "Accidentally poisoned."

FIRE.—The premises of Messrs. Mawson & Swan, wholesale chemists, Moseley Street, Newcastle, were burnt down on January 17. The loss was estimated at upwards of 12,000*l.* An assistant named Leithead went to a closet to get a bottle of spirituous perfume, the bottle fell and broke, and the contents came near a lighted candle and caught fire. The flames quickly spread to the inflammable contents of the warehouse, and in an hour, in spite of the efforts of the Fire Brigade, the whole warehouse was destroyed. Leithead, who was severely burnt, was taken to the infirmary.

NOTTINGHAM.

NOTTINGHAM AND NOTTS CHEMISTS' ASSOCIATION.—The annual supper of this association was held at the Flying Horse Hotel, on Wednesday, January 28, when 30 members and friends sat down to an excellent repast under the presidency of Mr. R. Fitz-Hugh, Mr. Lewis occupying the vice-chair. The toast of the evening, "Success to the Nottingham and Notts Chemists' Association," was proposed by Mr. F. H. Spenser and responded to by the chairman. The proceedings were enlivened by some good songs from Mr. Gascoyne and Mr. Mark Meats, and a most enjoyable evening was spent.

OLDHAM.

THE OLDHAM CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.—The annual meeting of this Association was held on January 20, and was adjourned until the 29th. The President (Mr. J. Wood) occupied the chair. The hon. secretary (Mr. Joshua Naylor) read the annual report. The Association, he said, was not making rapid progress, but they were financially stronger than twelve months ago. The secretary urged employers to take a greater interest and more active part in the working of the Association, which must inevitably result to their advantage. At the same time he acknowledged that most of the important chemists of the town had hitherto given valuable pecuniary aid to the Association. Lectures, essays, and papers had been given on the following subjects:—"Opium," by Mr. Harrison; "Dispensing and the Oxides and Oxygen," by Mr. Wood; "Tobacco," by Mr. Bambridge; "Tobacco and its Manufacture," by Mr. Boyd; and "Bromine, Iodine, and Chlorine," by Mr. Yates. In addition to these, examinations

classes, and *conversazioni* had been conducted on botany chemistry, materia medica, and pharmacy. The treasurer (Mr. Robert Taylor) stated that the expenditure for the past year had been 7*l.* 18*s.* 1*d.*, and the income 10*l.* 10*s.* 10*d.* The officers for the ensuing year were elected as follows:—President, Mr. John Wood (re-elected); vice-president, Mr. John Boyd; treasurer, Mr. Robert Taylor (re-elected); secretary, Mr. Joshua Naylor (re-elected). The Chairman then gave his annual address, dwelling chiefly on the business of the past year, and, expressing himself dissatisfied with the work done; hoped that the members would individually and collectively display more energy, and thereby raise the Association to a higher standard during the coming year.

PENZANCE.

SUFFOCATED BY A PIECE OF LIQUORICE.—On February 6 Mr. John Roscorla, borough coroner, held an inquest on the body of Absalom Bennett, who died suddenly on February 5. Deceased was taken suddenly ill about one o'clock P.M., when he complained of a choking sensation, and took a piece of liquorice to give him relief. He died almost immediately without a struggle. Mr. John Symons, surgeon, Penzance, said that when he arrived deceased was quite dead, and, in making an after-examination, he found a large piece of liquorice sticking in his windpipe, which in all probability was the cause of his death. A verdict of "Suffocated by a large piece of liquorice accidentally sticking in the windpipe" was unanimously returned.

RYDE.

ADMINISTERING A NOXIOUS SUBSTANCE.—On page 527 of THE CHEMIST AND DRUGGIST for December last we reported an extraordinary case, in which a landlady was accused of attempting to poison a lodger by putting cod-liver oil, petroleum, and some brown liquid in her soup. The case rested on the evidence of the prosecutrix and a servant. On January 7 the case came on for trial at the Hants Quarter Sessions, when the servant swore that she had been suborned by large promises by the prosecutrix, and that all she had said before the magistrates was false. The defendant was therefore immediately discharged with a verdict of "Not guilty."

SHEFFIELD.

FIRE.—On January 24 a fire broke out in the cellar of Jos. S. Bolton, chemist and druggist, 1 Edward Street. It was soon extinguished, but not before considerable damage had been done.

SHEFFIELD PHARMACEUTICAL AND CHEMICAL SOCIETY.—The annual meeting of this society was held on January 23. Mr. W. Ward, F.C.S., &c., in the chair. The following officers were elected for the ensuing year:—President, Mr. G. Ellinor, Ph.C., &c.; vice-presidents, Mr. J. Preston and Mr. Turner; treasurer, Mr. W. Jervis; joint hon. secretaries, Mr. E. Radley Learoyd and Mr. G. W. Newsholme; council, Messrs. Cubley, Ward, Carr, Burnell, Otley, Maleham, Hall, and Watts. The President delivered the inaugural address, in the course of which he said the past year had been eventful in the assembling for the first time in Sheffield of the British Pharmaceutical Conference, and expressed the great satisfaction it gave to the local members; referring to "Angellic Pharmacy," he thought it was high time a determined effort was made to protest against the manner in which money is unjustly taken out of the pockets of chemists in various parts of the country from the incompetence or want of correct knowledge of drugs by the majority of Borough and County analysts, and especially *Angellic* ones. The question we should ask is: "Is it right we should have to pay our costs when there is *no adulteration*?" He further noticed some of the amusing and variable interpretations of the Pharmacy Act, and the instructions given by some of our worthy coroners. In conclusion, he hoped to conduct the business of the society with that care and diligence which had characterised his predecessors. Votes of thanks to the chairman and other officers for past services concluded the business of the meeting.

TUNBRIDGE WELLS.

THE ACTION OF OIL OF JUNIPER.—At page 480 of our last volume we recorded an attempt made to procure miscarriage by the administration of oil of juniper. The defendant, J. I. Crump, was committed for trial at the Maidstone Assizes. The case occupied the whole of January 15. The jury found a verdict of "Guilty," but added a recommendation to mercy, on the ground that the young woman was a consenting party. The learned Judge passed a sentence of 15 months' imprisonment, with hard labour, taking into consideration the recommendation, and the fact that oil of juniper was not in itself so noxious as some substances which might have been used.

JEAN BAPTISTE ANDRÉ DUMAS.

AN extra number of *Nature*, published on February 6, is devoted to a biographical sketch of Dumas, by Dr. A. W. Hoffman. The life of a chemist, who has been a leader in most of the advances of chemistry of the most rapidly-advancing century of the world's history, must interest all. Hoffman's sketch covers 40 pages, and we have few to spare; but we may extract some of the paragraphs which touch most closely on pharmacy.

Dumas was born at Alais, in the department of the Gard, on July 14, 1800. He raised himself to the head of science in France. He has taken an active part in the public affairs of his country; he has served successively as Deputy to the Legislative Assembly, as Minister of Agriculture, as Senator, as President of the Paris Municipal Council, and as Master of the Mint of France. For many years he has been permanent secretary to the Academy of Sciences, and is now a member of the French Academy. In 1816 Dumas travelled on foot to Geneva, where he resided many years.

DUMAS' LABORATORY.

"At Geneva Dumas found everything to expand his ideas, to stimulate his emulation, and thus to prepare him for his future career. There were lectures on botany by M. de Candolle, on physics by M. Pictet, and on chemistry by M. Gaspard de la Rive. He had, besides, the superintendence of a tolerably large laboratory belonging to the pharmacy of Le Royer, and formerly used for the courses of applied chemistry given by M. Tingry.

"The pharmaceutical students, who frequently united in botanical excursions during the summer, started the idea of winter meetings for scientific studies. Seeing that Dumas had a laboratory at his disposal, it was suggested that he should give them a course of experimental chemistry. This was his *début* in the professional career. It was by no means an easy task, for although the laboratory was well provided for all pharmaceutical operations, and even for some chemical experiments of the old school, it possessed none of the modest appliances which a lecturer, even at that time, required. Most keenly felt was the utter absence of any of the implements necessary for the preparation and collection of gases. But a supply was rapidly improvised. To obtain gas-jars, lamp-chimneys were closed with watch-glasses, cemented on with wax. An old bronze syringe was turned into an air-pump, and barometer-tubes bent over a flame completed the stock of apparatus."

THE FIRST PHARMACY OF IODINE.

When Dumas was about 18 years of age "he had the good fortune to make himself useful to one of the principal physicians of the town, a circumstance which contributed not a little to advance him in the circles in which he had hitherto lived. One morning Dr. Coindet came in hastily to Le Royer's. 'You occupy yourself with chemistry,' he said to Dumas. 'To some extent,' was the answer. 'Then you could tell me whether iodine is present in sponges, and more especially in carbonised sponges?' 'I will examine them for you.' Having, after some days, received an affirmative answer, Dr. Coindet no longer hesitated to consider iodine a specific against goitre. Dumas was then asked to give his attention to the subject, and to point out

ne preparation in which iodine might be most conveniently administered. He suggested tincture of iodine, potassic iodide, and iodised potassic iodide. Soon afterwards these few remedies were mentioned in a German journal published at Zurich, and it is in this connection that the name of Dumas is first met with in scientific literature. The same journal gave the formula proposed for these remedies, as also their mode of preparation. It need scarcely be mentioned that at that period, so soon after the discovery of iodine by Courtois, none of the iodides were known to the trade, iodine itself being the only commercial article. The discovery of Dr. Coindet produced a great sensation all over the world, and for many years the manufacture of iodine preparations for medical purposes proved a source of wealth and reputation to the pharmacy of Le Royer."

DIGITALIS.

About this time Dumas engaged with Dr. J. L. Prevost in an attempt to eliminate the active principle of digitalis. A long and irksome investigation produced no results.

ÈLÈVE EN PHARMACIE.

In the title of his first paper in the *Bibliothèque Universelle de Genève*, Dumas figures as "Èlève en Pharmacie."

LE BLANC'S SODA PROCESS.

We must skip a long and fruitful period of this life, with many interesting researches bearing closely on pharmacy, and turn to another phase.

Nicolas Le Blanc, the inventor of the soda process, never reaped the fruits of his splendid discovery, which is one of the most important factors in the advance of science during his century.

In 1855 the Marquis de Manoury presented to the Emperor Napoleon a petition from the family of Le Blanc, praying for a tardy recognition by the State of the services their father had rendered to France and to the world at large. Dumas was reporter to the committee of the Academy which inquired into the matter, and from his report we glean the following interesting history.

In 1789 Nicolas Le Blanc, surgeon, asked his employer, Philippe Egalité, Duke of Orleans, to advance the money for the establishment of a factory for converting sea salt into soda. Preliminary experiments being satisfactory the Société de la Maison-de-Seine was formed, and a document was signed in which the Duke's financial agent undertook to provide 200,000 livres tournois.

The soda factory had scarcely commenced working at La Franciade, near St. Denis, when the Revolution destroyed the Duke's fortune, and the army section of the Committee of Public Safety invited the citizens to reveal the secret of any process they possessed which might prove useful in the defence of the country. This admitted no hesitating compliance, and on June 20, 1794, was published an account of Le Blanc's process, probably written by himself. After the storm of revolution had blown over vigorous but unsuccessful attempts were made to obtain suitable recompense to the inventor, but he died in 1806, broken-hearted, from disappointment and distress.

Not the least wonderful incident in this wonderful biography is that Dumas still lives in full activity and energy. In 1878 he presented to the Academy an account of some important researches on the occlusion of oxygen by silver. A beautiful portrait by Jeans accompanies the biography, and to the latter we must refer all who wish for fuller information.

UNINTERRUPTED SUNLIGHT AND AROMA.

PROFESSOR SCHÜBELER, of Christiana, has been investigating for 30 years the effect on vegetation of the almost unbroken sunlight of the short Scandinavian summer. Plants raised from foreign seeds are found to acquire increased intensity in colour and aroma. The flowers of *Veronica serpyllifolia* become deep blue; those of *Epilobium angustifolium*, *Lycchnis sylvestris*, *Geranium sylvaticum*, and many other plants are far larger and more brilliant in Lapmark than in southern Sweden. Swedish-grown celery,

identical in appearance with that of Covent Garden, has a sharp unpleasant taste, and Norwegian onions, shallots, and garlic are stronger than is palatable. Other observations have a very practical commercial bearing. Flückiger has found that Norwegian juniper yields much more essential oil than that of Central Europe. Schübeler shows that four, five, and even eight per cent. of oil can be expressed from uncultivated linseed grown in Norway, while in Holland, Germany, and Middle Russia no more than three or four per cent. can be obtained. His experiments have convinced him that essential oil of lavender obtained from plants grown in Christiana and Thronhjelm greatly excels in aroma the oil obtained from the Merton [?] gardens, which has hitherto been esteemed the best in the world. An interesting abstract of his researches is given in *Nature* for January 29.

THE COCHINEAL INSECT.

A CORRESPONDENT of the *Scientific American* who has had good opportunities of observation in Teneriffe gives some curious facts about the cultivation and preparation for market of the cochineal insect.

The birth is brought about by placing the madres (mothers) in a kind of hot-house, and spreading them out thinly on shallow wooden boxes. The insects as they thus appear may be likened to grains of wheat just taken from a pool of dirty water, as they are about the size and shape, but of a dark lead colour. They have neither head, legs, nor arms, and show no signs of life; yet after being in the warm room a short time they begin to give forth their young.

These to the inexperienced eye seem to be little white specks, as devoid of life as the mother. On close examination, however, they are found to be endowed with life and activity, and have their head and arms or legs as well formed and distinct as other insects.

The mother continues to give birth for some days. Some insects are said to give as many as 800 young ones, but they invariably die when they have brought forth their progeny.

The young ones are laid on cotton cloths, which are sometimes covered in a few moments, so rapidly does the parent give birth, and some one has to be with them constantly for removing the full cloths and replacing fresh ones. The cloths as they are covered are sent at once to the cactus, to which they are fastened by a small thorn which grows on the plant.

Once attached to the cactus, the insect forsakes the cloth and adheres to, or burrows slightly in, the plant. It soon becomes stationary, begins to grow, and assumes the characteristics of its parent—that is, loses all signs of animation, drops all its members, and becomes a part and parcel, as one may say, of the plant.

It seems to "shuffle off its mortal coil," and appears as inert and inanimate as the cactus. Notwithstanding this apparent lifelessness, it is as sensible to heat and cold as other insects. Every year the proprietor suffers more or less loss from the extreme heat sometimes felt here. This heat comes from the great Sahara Desert, and causes death to the insects by asphyxia. Early in July there were a few days of this weather, which, it is said, destroyed at least one-third of the crop. I can readily believe this, as the insects had just been "planted," or put upon the cactus; and the younger they are the more sensitive they seem to these changes of the weather. They are, however, liable to loss this way as long as 30 or 40 days after being placed on the plant, and when near to maturity.

The heat kills or stops growth, the insect dies, and drops from the cactus on receiving the slightest touch of wind or other weather. The most remarkable point concerning this specimen of the animal world is that the foregoing *only refers to the females*, as the male is a creature entirely distinct in its form and habits and mode of life.

The males are very scarce in comparison with the females—some assert in the proportion of 1 to 100,000. The male has wings, and flies from plant to plant, with a body like an ant. These visits from plant to plant give for their result the operation I described at the beginning of this article—that is, the hatching of the young insect.

FORMULÆ OF SECRET MEDICINES.

The Formulæ given below are translated (by special permission of the author) from a German collection compiled by Mr. Edward Hahn, Apotheker. The names following most of the Formulæ are those of the authorities quoted for the analysis. The weights are almost invariably given in metric denominations. A gramme is equivalent to 15½ grains. The prices quoted are the nearest English equivalents to the original retail price.

MUNDWASSER VON J. POHLMANN—J. POHLMANN'S MOUTH WASH (Vienna).—Three kinds are made. No. 1. "Spiritus anisi compositus," 320 parts; tinctures of myrrh, cochineal, benzoin, orris, vetivi-ver, spilanthes, of each 120 parts; pellitory tincture, 20 parts; Peruvian balsam, 1 part; peppermint oil, 4 parts; mix, leave for a few days, and filter. No. 2. A filtered tincture of common and star anise, of each 16 parts; fresh spilanthes herb and pellitory root, of each 1 part; benzoin and myrrh, of each 2 parts; vetivi-ver root, 4 parts; orris root, 8 parts; cochineal, 3 parts; spirit, 256 parts; peppermint oil, 1 part; cinnamon oil, ¼ part. No. 3. A filtered mixture of "spiritus anisi comp." and valerian tincture, of each 480 parts; orris tincture, 1,920 parts; tinctures of myrrh and benzoin, of each 1,200 parts; spilanthes tincture, 720 parts; pellitory tincture, 60 parts; Peruvian balsam, 20 parts; cinnamon oil, 3 parts; clove oil, 4 parts; peppermint oil, 15 parts; cochineal tincture, 240 parts.

The "spiritus anisi compositus" mentioned above is made by distilling 26 parts from the following mixture:—Common and star anise, of each 1 part; spirit, 26½ parts; water, 5 parts, and dissolving ¼ part of cinnamon oil in the distillate.

The tinctures are all made by digestion: Cochineal tincture from cochineal 1½ to spirit 27; benzoin and myrrh tinctures, 1 to 27; orris tincture from 1 of the root to 13½; vetivi-ver tincture, 1½ to 54; spilanthes tincture 1 part fresh-flowering herba spilanthes oleraceæ to 51 spirit.—Hager.

MUNDWASSER VON DR. PFEFFERMANN—DR. PFEFFERMANN'S MOUTH WASH.—A filtered tincture from star anise, 1 part; cloves, ½ part; red cinchona, ¼ part; eighty per cent. spirit, 24 parts; peppermint oil, ⅜ part. 2s. 9d.—W. H.

MUNDWASSER VON HERMANN THIEL—THIEL'S MOUTH WASH (Berlin).—Spearmint, 3 parts; sage, 2 parts; sandalwood, 4 parts; water, 160 parts; spirit, 40 parts; digest and filter.—Hager.

MUSTANG LINIMENT OF THE AMERICANS, for sprains, rheumatism, chilblains, &c. A mixture of petroleum, ammonia, and spirit.—Vorwerk.

COOPER'S MUSTARD PAPER, OR SINAPINE TISSUE.—A sheet of vellum-post paper 13 centimetres long, 7.8 centimetres broad, transparent and nearly colourless, but saturated with a gummy solution containing the acrid ingredients of euphorbium and capsicum. It has nothing to do with mustard.—Hager.

J. HERRMANN'S MYKOTHANATON (Berlin).—For preventing mould in houses. A greenish-yellow fluid with a strong smell of hydrochloric acid and acid reaction; one litre contains 1.16 gramme iron oxide and alumina, 1.47 gramme copper oxide, 16.72 grammes magnesia, 99.9 grammes sulphuric acid, and an indefinite quantity of hydrochloric acid. It is, therefore, the liquor left in the manufacture of carbon dioxide from magnesite and sulphuric acid, mixed with crude hydrochloric acid and 3 grammes of copper sulphate to a litre. 50 kilos. 25s.—Prof. H. Ballo.

JOHANNES MÜLLER'S MYKOTHANATON (for the same purpose).—A solution of calcium chloride, 750 parts; sodium sulphate, 1,500 parts; corrosive sublimate, 60 parts; in water, 5,000; mixed with hydrochloric acid, 2,500 parts.—Wittstein.

VILAIN & Co.'s MYKOTHANATON (Berlin), commended as an approved preventive and destroyer of fungus in wood, houses, and walls.—A clear, almost colourless, liquid, containing common salt, alum, sulphuric acid, and traces of iron and arsenic, dissolved in water. One litre, 1s. 6d.—Hager.

MISCELLANEOUS FORMULÆ.

STRYPUS STIGMAT. MAÏS.—

Extr. stigm. maïs	12 grammes
Aq. destill.	350 grammes
Sachari	660 grammes
Alcohol	10 grammes.—M.S.A

A kilogram of the stigmas yield 12 grammes of extract.—Jaillard, in Union Pharm.

FOR CHILBLAINS.—Immerse the hands or feet for 10 minutes night and morning in a lukewarm solution of a teaspoonful of good chloride of lime in 1½ pint of rain water. Or rub in night and morning an ointment of 1 part of chloride of lime and 9 parts of fat. This must be made fresh every fortnight.

SIROP DE Goudron de Norwège.—Sold at the Saxon Apotheke, Dresden, as a cough medicine. A yellowish brown fluid with a strong smell of tar, made by dissolving 130 parts of sugar in 70 parts of tar water. The tar water is made by shaking 1 part of tar with 10 parts hot distilled water, allowing the tar to separate, and decanting.—Pharm Zeit., xxv., 39.

KINDERMEHLE, CHILDREN'S FOODS.

DRS. N. GERBER and P. Radenhausen have published in the *Schweizerische Wochenschrift für Pharmacie* some remarks on children's foods and some analyses performed during the third quarter of the current year. "Under children's foods," they say, "are commonly included compounds of condensed milk with prepared cereal or other meals. All other foods made without milk should properly figure, not under this title, but as oat, barley, or dextrine meals, according to their composition. A preparation named 'Lactin,' made by Grob & Kunz, of Wattwyl, has very recently appeared on the market. It is intended to make cow's milk similar in composition to woman's. It contains: Milk-sugar, 95.27; salts, 2.62; water, 2.11. The salts consist of potassium chloride and carbonate, with a trace of phosphate. The following is the composition of seven of the best known foods; the albuminous ingredients are not calculated by multiplying the percentage of nitrogen by 6.25, but are estimated by difference, like cane-sugar in condensed milk, special care being taken to account for everything else.

Food made by	Water	Salts	Phosphoric Acid	Carbohydrates		Cellulose	Albumen	Fibre
				Soluble	In-soluble			
Nestlé, of Vevey ..	5.78	1.52	0.39	45.00	32.75	4.49	9.96	0.30
Gerber & Co., Thun ..	5.52	1.35	0.43	44.32	31.56	4.42	12.33	0.50
Dr. N. Gerber ..	7.24	2.98	0.68	41.21	23.04	5.76	18.77	1.00
Anglo-Swiss Co., Cham ..	6.34	1.75	0.33	39.32	34.48	7.08	10.62	0.50
Oetli, Vevey and Montreux ..	6.40	1.69	0.35	49.26	23.06	6.76	12.33	0.50
Dr. Ridge, London ..	7.72	1.85	0.38	42.60	33.19	4.93	9.21	0.50
Loble, London ..	6.07	1.65	0.36	42.00	33.39	5.39	11.00	0.50
..	9.64	0.44	0.16	6.64	74.75	1.15	6.38	1.00
..	9.47	1.53	0.42	35.81	34.59	6.81	11.29	0.50

ATRAMIN INK AND VARNISH.—"P." in the *Bunzlauer Pharm. Zeit.*, says of atramin:—"I know of no material by which the smallest or largest quantity of ink can be prepared extemporaneously with equal certainty and speed. Atramin also serves for the preparation of a spirit varnish for lacquering dark objects of all kinds, as leather, wood, papier-mâché, &c. Two or three layers on glass make it quite opaque. It should be made by preparing, first, a solution of 1 part of shellac in 3 parts of spirit, secondly, a solution of atramin in 8 parts of spirit; made with the help of the water-bath at about 40° C. and frequent agitation. The second solution must stand some hours to cool and settle, and one part must be mixed with two parts of the shellac solution.

CHEMICAL SOCIETY.

January 15.

MR. WARREN DE LA RUE, President, in the chair.

The following papers were read.

On the Effects of the Growth of Plants on the Amount of Matter removed from the Soil by Rain," by Dr. J. H. Prevost. A 3 inches deep was placed in two glazed earthenware pots, 17 inches in diameter, on July 21; 4 grammes of white clover seed were sown in one, the other being blank. The pots were exposed till October 4; the drainage water was collected and analysed: that from the clover soil contained 41 grains of solid matter per gallon; the other 220. The author concludes that rain removes much more matter from uncropped than from a cropped soil.

Mr. Wynter Blyth described a simple apparatus for the treatment of substances in open dishes by volatile solvents. The dish is placed inside a cast-iron pan, and covered with a glass bell-jar with condenser attached, the joint between the bottom of the pan and the bell-jar being made tight with mercury.

"On Dibromanthraquinones," by Mr. W. H. Perkin. By treating bromine with anthraquinone, α dibromanthraquinone is formed, melting at 245° C.; by boiling tetrabromanthracen with chromic acid dissolved in a large excess of glacial acetic acid an isomer, β , dibromanthraquinone is obtained, melting at 275° C. By the action of caustic alkalis on these bodies alizarin is formed in both cases. The author discusses the formation of this substance. In the case of the body which colours matters were formed with the alizarin, one being mordants, the other not. The author is investigating these bodies. He appends a note, in which he concludes, after further examination, that Auerbach's isopurpurin is a mixture of flavopurpurin and anthrapurpurin, and is not identical with anthrapurpurin.

Mr. Warington contributed some notes on some practical points connected with his laboratory experience. He has used with great convenience the indiarubber joint covered with mercury, which was proposed by Dr. Frankland as a substitute for the steel blocks connecting the laboratory and measuring tubes. At first the indiarubber wore out rapidly. This was prevented by tying it above the conical stopper as well as below. He recommends the coating of laboratory vessels, &c., by heating the wood and then rubbing in raffin. The wood is thus protected from the action of acids. In the determination of nitrates by Frankland's process the author suggests the addition of a drop of dilute hydrochloric acid to ensure a complete reaction between the mercury and the nitric acid. By means of a solution of di-ethylamine in strong sulphuric acid, the author has detected, by the blue coloration produced, $\frac{1}{10000}$ th of a milligramme of nitrogen as nitric acid.

February 5.

MR. WARREN DE LA RUE, President, in the chair.

It was announced that a ballot for the election of fellows would be held at the next meeting of the Society, February 19.

The following papers were read:—

"Note on the Assumed Formation of Ozone by the Atmospheric Oxidation of Phosphorus," by C. T. Kingzett. The author criticises a paper recently read on the above subject by H. McLeod, and contends that his arguments fall to the ground because he has made a mistake in calculating the results of his experiments.

"Contributions from the Laboratory of Tôkiô, Japan," by W. Atkinson:—

II. "On Persulphocyanate of Silver." When this yellow salt is boiled with water it turns black; a mixture of sulphide and undecomposed persulphocyanate being formed in proportions which vary with time, temperature, and the quantity of free acid present. At the same time cyanogen sulphide is probably formed.

"On Methylated Dioxethylenamines," by H. F. Morley. The author has prepared, by the action of mono- and di-methylenamines on glycolic chlorhydrin, mono- and di-methyldioxethylenamine, and analysed their platinum salts.

"Note on Igasurin," by W. A. Shenstone. The author has prepared this substance, obtained by Desnoix, and finds it to be a mixture of brucine and strychnine.

"On some Reactions of Tertiary Isobutylic Iodide," by L. Dobbin. By prolonged shaking with a 12 per cent. solution of hydrocyanic acid or water at the ordinary temperature, trimethyl carbinol was obtained; by the action of zinc oxide at 15° , isobutylene was formed, no isodibutylene could be separated. The author has also studied the action of sodium on tertiary isobutylic iodide. Isobutylene, isobutylene, and hydrogen were formed with small quantities of a hydrocarbon not absorbed by fuming sulphuric acid.

THE PRODUCTION OF BROMINE IN THE UNITED STATES.

THE only important source of bromine in the United States is the liquid which remains after the extraction of salt, and which is known in the salt-making industry as the "mother waters." The *Moniteur Scientifique* gives a short description of the process employed in separating this important element from the saline liquors. The latter, when first pumped up from the pit, mark 9° Baumé. They are evaporated in long iron boilers to 15° Baumé, allowed to settle, then further evaporated to the crystallising point in wooden tubs heated by steam. The first crystallisation forms the salt of commerce. The tubs, five in number, are placed side by side, and every day the liquor is decanted from one to another—from No. 1 to No. 2, then to No. 3, and so on to No. 5. The crystallised salt is removed from each tub after draining off the liquid. When the brine reaches tub No. 5 it has become mother liquor, and consists principally of chlorides of calcium, magnesium, sodium, and a little chloride of aluminum, with varying proportions of bromides of sodium and calcium. Tub No. 1 is filled every day with fresh brine, so that the process becomes continuous. The mother liquor, marking 30° to 38° Baumé, is evaporated to 45° , thus separating a new quantity of salt. The liquor is then decanted into stone stills; materials for the production of chlorine are added; and heat is applied in the form of steam, injected directly into the still, until all the bromine has been eliminated and vaporised. It then passes into a condenser, and thence into a receiver.

The production of bromine was first begun in the neighbourhood of Parkersburg, Pennsylvania, by Hegeman, a Danish chemist, formerly in the employ of the Pennsylvania Salt Manufacturing Company. His operations were at first rather of an experimental character, and there being but little demand for the product at the time, he realised from \$3.60 to \$7 per pound for what he made. The use of bromides becoming more general, however, other chemists began the manufacture of bromine, their process differing from Hegeman's only in certain modifications of detail. Herman Lemer is now regarded as the largest producer of bromine in the United States. This manufacturer was originally a poor shoemaker of Natrona, Penn., but by a rare display of energy and ability, notwithstanding his limited education, he has reached his present position. The salt regions of Ohio and the Kanawha furnish salt whose mother waters are twice richer in bromine than those of any other salines as yet discovered. It is a remarkable fact that the mother waters of the saltworks at Syracuse and those of the West contain no bromine, or at least but mere traces of it. The annual production of bromine varies considerably, owing to uncertainties in the salt trade, upon which depends the bromine trade.

The capacity for the production of the article increased during 1875 and 1876 about three times what it was in 1874 (owing to facts just stated), but the actual production has not materially increased. The present production will reach about 1,100 pounds per day. In view of the high prices of bromides in the European markets, several lots have recently been exported. By reason of the great advantages that American manufacturers possess for the production of the bromides, it is believed that the importation of bromine, already quite limited, will soon cease altogether. The consumption of the article, in the form of the bromides, has considerably increased. During the last twelve years, bromide of potassium has been the principal salt used, but for the past three or four years, bromide of sodium, zinc, and several

other bromides have become very popular. The only really new application of bromine is the use that has been made of it for some months past by a Paris house in the production of a new aniline colour.—*Scientific American*, vol. 46, No. 16, p. 240.

A FORGOTTEN CHAPTER IN THE HISTORY OF ANÆSTHETICS.

A LECTURE by Dr. Wymans, of the Detroit Medical College, is reported in the *Detroit Lancet*, on the subject of "Holland Oil." It may easily be abridged into a few paragraphs. The lecturer credits his information to Professor Franek.

In 1771 Van Sweiten was 71 years old, and enjoyed an omnipotence in science which only Humboldt has since enjoyed. On May 1, 1771, three young gentlemen were introduced into his study. Like the professor, they wore their hair without powder, combed down their backs, on a black coat closely buttoned, which covered every trace of cuffs or linen. "What do you desire, my children?" asked Van Sweiten, who was a devout Catholic, and held between his fingers a string of beads, blessed by the Holy Father and given him by the Empress Maria Theresa.

"We come to teach Van Sweiten that which he knows not," answered one of the visitors.

"You will not have much trouble in doing that," replied Van Sweiten, smiling.

"We come," said one of the young gentlemen, "to show the author of 'Aphorisms of Medicine' a medicine he has never seen."

"The deuce," sneered Van Sweiten; "your patronage begins to displease me."

Not the least disturbed by the sardonic smile of the celebrated professor, the third young gentleman expressed himself in these terms: "Like the philosophy of antiquity, we speak to Pain: *You are only an idle word*, and we will prove it."

"Then you speak of a miracle?"

"We are ready to realise it in your presence."

Van Sweiten told them that the days of mysteries and mystifications had passed.

"We repeat it to Dr. Van Sweiten. We possess a secret by which we can suspend life and annihilate pain long enough to perform a surgical operation."

"Very well; come to-morrow to my clinic, and demonstrate the proof of that which you pretend to know."

He dismissed them with a gesture, and went at once to the Empress Maria Theresa, to whom he related the singular visit that he had received. Maria Theresa, who entertained the most affectionate regard for Van Sweiten, and had not only made him baron, but made him her first physician, was at this moment embroidering a pair of ruffles for the old savant, who refused to wear any but those provided by his sovereign.

The result of his interview with the Empress was that she declared her intention to witness the experiment.

The next day the three strangers operated at the clinic in presence of Van Sweiten and a lady clad in black, whose face was covered by a thick veil. They went to work without hesitation, manœuvred the furnaces and retorts, previously prepared, and soon had a mastiff inhaling a liquid as it distilled. The animal commenced to exhibit symptoms of inebriation, and soon fell full length upon the ground, like a cadaver. One of the strangers now made a large incision upon the dog's chest, and covered this wound with a surgical dressing; the animal gave no sign of pain, and little by little began to breathe, raised himself up, got upon his feet, and walked about as though nothing unusual had transpired.

"It is a miracle, a real miracle!" cried the Empress.

"A miracle that we can repeat any day, at any hour."

"And you will not hesitate to operate in that way upon a patient?"

"No, master; we do not hesitate."

"Then experiment on me," said Van Sweiten, advancing towards the three young gentlemen.

They grew pale and trembled.

"Are you afraid? Are you not certain of success?"

"We will experiment upon ourselves all that you wish. But upon an old man, the pride and glory of Germany!"

"They are right!" interrupted the Empress. "Not to hasty, gentlemen."

She dismissed the three strangers.

Reports of these experiments made great excitement in Vienna, but the almost sudden death of Van Sweiten in a gangrene of the leg, which occurred on May 18, only a few days after the experiments at the clinic, diverted public attention. Doubtless the grave political questions that about this time confronted the reign of Maria Theresa effaced from her memory the mysterious anæsthesia that she had witnessed, for nothing more was heard of the experiment nor of the Holland oil (*huile des Hollandais*), nor of its inventors, although one finds in the works of that day the recipe for this oil alongside of those for the *liqueur de calloue* (silicate of potassa), *liqueur d'Or* (liquor of gold), General Lamotte), and the *liqueur de Van Sweiten* (perchloride of mercury).

There exists no trace of these chemists, who certainly discovered anæsthesia. None of their public experiments has been published. Professor Franek thinks that one of them was Gautier Von Doehren, a physician of Flemish Holland.

THE CINCHONA AND OTHER PRODUCTS OF CEYLON.

THE most important pharmaceutical product of Ceylon is undoubtedly Cinchona. Our share in the world's bar harvest is still small, but will rapidly increase. London has imported from the British East Indies during the last three years, in 1876, 1,415 cwt.; in 1877, 4,564 cwt.; in 1878, 4,597 cwt. The total imports of bark in these years, chiefly from New Granada, Peru, and Ecuador, was 26,021 cwt. 34,900 cwt., and 53,886 cwt.

Cinchona succirubra is the variety most favoured in Ceylon. In many parts it is grown along road sides, and in the gaps in bad fields of coffee. On the Dimbula Company estate, where there are seventy-three miles of paths, 600,000 trees have been planted out. A report from the Badull District states that nurseries of cinchonas are found on most estates, and a correspondent of the *Ceylon Observer* says it is worth while to visit the Madamahanuwara District to see how much can be done on blown land with rich soil by judicious felling and careful selection of sites. Here, and a Rangalle and Knuekles, cinchona is progressing rapidly and promising well. Mr. Frank Peto writes from Vicarton that he has planted 40,000 *succirubras*. In other parts of the district (Dimbula) planting is rapidly extending.

It is found that the trees flourish best at elevations more than 2,500 feet above sea level. For instance, the Dimbula Company's estate is 4,500 feet above the sea. But the Ceylon correspondent of the *Madras Times* publishes an analysis of a red bark grown at an elevation of about 2,400 feet, which showed total mixed alkaloids 4.03 per cent., and quinine sulphate 2.06.

A planter at Rambodda, who has a considerable acreage of cinchona three or four years old, has refused 500*l.* an acre for it, valuing it at 620*l.* The editor of the *Ceylon Observer* confirms this, stating that the amount offered was 40,000*l.*

Red bark from trees nearly five years old, grown in the shade at Deltota, has sold at 1*s.* 8*d.* to 3*s.* a pound.

Bark is exported in cases of 800 lbs., the freight to England costing 50*s.* to 3*l.*

London agents assure the planters that greater care expended on sorting the bark before export would materially increase its market price. Good grown bark, worth 5*s.* 6*d.* a pound, has been found, in cases of red, worth 3*s.* to 4*s.*

Numerous insect and other enemies attack the tree in its various stages. Trees grown at elevations too low are attacked by a kind of canker which injures the bark. In some cases the roots of the seedlings are destroyed by some unknown "poohie," as insect pests are called here. Little sooty beetles nip through the stem just above ground apparently in wanton mischief. Swarms of small brown ant-like spiders are found where this has been done. A boring beetle happily not very common as yet, attacks the stems of growing trees, committing fearful ravages; and monster green

terpillars feed on the leaves. In Ceylon the white, and in Madras the black, coffee grubs have transferred their intentions to the cinchonas. Syringing with kerosene and water, as recommended some months ago in THE CHEMIST AND DRUGGIST is found to be an effectual protection against some of these "poochies." Mr. Morris, who has recently been transferred from the Botanical Gardens here to those at Jamaica, writes to the *Ceylon Observer* that he has begun his work for his new home by examining cinchona disease which appears to be rather prevalent there, and which he has seen in Ceylon also. It is the first instance to a cracking of the bark exposing the lower cambium. In this fissure a small fungus establishes itself; it ultimately attacks and eats away the soft cambium along a whole strip. After a time the bark deprived of its vital part dries up, and when touched it sounds hollow and often falls off, exposing a longitudinal scar with the wood discolouring underneath. If the fungus works round the tree it rings it; the top gradually dies down, and the tree is destroyed. The larches at home sometimes suffer in the same way.

Cinchona cultivation in other parts of the world naturally excites much interest here. George King, M.B., F.L.S., superintendent of cinchona cultivation in Bengal, has recently published "A Manual of Cinchona Cultivation in India," giving full information on every point. Just two years ago the acting commissioner for the Nilgiris announced to the Madras Government that the supply of moss required in the cinchona plantations was rapidly becoming deficient. He was directed to prepare a scheme for its conservation, and in papers dated June 12, and recently published, he recommends that the collection of moss should be prohibited between January 1 and May 1, and that a seigniorage should be levied on it. The first suggestion has been adopted, but as the conservation will entail watching the moss collectors, and the acreage of cinchona cultivation is largely extending, it is considered wiser to levy a small charge per acre of cinchona-planting, whether Government or private property. The Government reserves the right to prohibit the collection of moss in districts where it is deemed necessary. A correspondent of the *Observer*, writing on October 4 from Neddi-vitteem, in Southern India, says.—

"The demand for seed increases rapidly; we are not able to execute the orders fast enough. The Government prohibit the exportation of Calisaya seed until the demand from the Wynaad and Nilgiris is met. The season for this seed is past long ago.

"Our monsoon has been heavier than usual, but a very fine one indeed for the new estates; some hundreds of acres of *officinalis* have been planted this season. Private parties are going in largely for nurseries lately and apparently make good thing out of it. The deliveries of seedlings are estimated at upwards of 25 lacs, the greater number being red barks, to the Wynaad and Coorg. Next year the deliveries will be much greater, as I have heard of one order of 30 lacs.

"We have not lost any cinchonas this year, I am glad to say, and we do not lose our young plants in patches, as is the case with you.

"I have just finished stripping a plot of fourteen acres of red barks, thirteen years old, which has yielded upwards of 40,000 lbs. green bark, or 19,000 lbs. dry; fully two-thirds of this is renewed bark worth 6s. per lb. This is the fifth crop given by the trees. There is no improvement in the bark supply; the average number in to date is but one-third to half cooly per acre."

That the same trees yield a fifth crop of bark in their thirteenth year is a great encouragement to growers of red barks who have facilities for mossing.

The season's crop of cinchona bark from the Government estates in Madras is estimated to yield about 150,000 lbs. Up to the beginning of October 450 bales of 100 lbs. each had been despatched to London. Last year the Madras Government realised something like four lacs of rupees (40,000*l.*) from the crop of bark. If the quality of the bark and the prices keep up to last year's average, the amount realised will considerably exceed last year's receipts.

The Government Cinchona plantations, in Bengal, which have an area of 2,000 acres, yielded 250,000 lbs. of bark during the year. Of the out-turn of febrifuge manufactured from the bark, 5,500 lbs. were supplied to Government medical depots in the three Presidencies, and the rest was sold to the

public. A profit of about half a lac was obtained on the operations of the season.

We learn from the *New York World* that a Mr. Morris started thence this summer intending to explore the Amazon and to visit the forests of Cinchona, found in 1875 by an explorer near the head of the neighbouring Rio Iça. The journey will, in all probability, consume about four years, and it is quite possible that the forests will be found already stripped and practically destroyed.

Next to cinchona, cinnamon is the most important medical production of Ceylon. The market is in a very depressed state. Cinnamon has been grown wherever it could be during the past few years, and over-production has brought it down from 83 cents a pound, at which it sold two years ago, to 56 cents at the present. (The cent is 100th part of a rupee, the nominal value of which is 2s.)

Quotations here vary from 7*d.* to 2s. a pound, according to quality. The cost of peeling is 1*3*/*d.* a pound; freight to England by steamer is 50s. to 60s. a bale or bag of 800 lbs., and cultivation, supervision, and other expenses are so heavy that cinnamon property, worth 500 rupees an acre five years ago, could now be had for less than 200 rupees. The jungles of Uva, in the Kandyan district, are full of an undergrowth of cinnamon. It is quite a custom for low country Cingalese to visit the district to cut forest cinnamon, but the price is so low at present that a "peeler" is rarely seen. It has been suggested that where the altitude is too great for the successful cultivation of cinnamon bark the seeds might be utilised by expressing the fatty oil they contain. Very little indeed is known about the subject at present, but we await further development. The hard times for coffee and cinnamon planters have directed much attention to new crops.

Cacao has been introduced, and seems to promise well in some districts. White ants are the most dangerous *anticoists*.

Ginger and cardamoms both grow wild in the jungles, but are little appreciated by the natives. Cardamoms are being cultivated in several districts, and have produced crops so profitable that they have astonished their owners. Vanilla, cloves, sago, and the blue and red gum are cultivated to a small but increasing extent.

Chemists' Assistants' Association.

ANNUAL DINNER.

ON January 28 the Chemists' Assistants assembled at the Holborn Restaurant for their annual dinner. In spite of a dense fog, nearly a hundred sat down to an excellent meal. Professor Redwood was in the chair, supported by Prof. Bentley, Drs. Muter and Paul, Messrs. J. Moss, A. P. Luff, and Smart. Mr. Branson, the President, filled the vice-chair. The toasts of the "Royal Family" and the "Medical Profession" received their accustomed attention, and Prof. Redwood then proposed the toast of the "Pharmaceutical Society." The founders of the Society, he said, had with perfect disinterestedness devoted their time and talents, their money and means, to improve the education of those who immediately became their most formidable competitors. He coupled with the toast the name of John Moss, and the enthusiasm with which this name was received put the Society far in the background.

The Association, Mr. Moss said, in responding, had disappointed the fears of some and the half-hearted hopes of others, who had expected small things of it. The spirit of independence which led to its formation was praiseworthy, and it was wise to bring the peaceful pipe and the sociable cigar into the company of scientific papers.

The toast of the evening, "The Chemists' Assistants' Association," was responded to by Mr. Branson, who was received with musical honours. Dr. Paul was toasted as the representative of the Pharmaceutical Press. In proposing the health of the "Visitors" the Chairman praised Dr. Muter's efforts in the cause of pharmaceutical education. Dr. Muter rejoiced that old jealousies had at last been healed. Mr. Branson proposed the health of the President.

Some excellent songs, music, and recitations by the members enlivened the proceedings.



COMMISSION ON SALE OF A BUSINESS.—JOHNSON v. EMSLEY.

At the Clerkenwell County Court on January 16 was heard a claim made by plaintiff for 10*l.* 10*s.*, being commission on the sum of 620*l.*, purchase-money of the defendant's business, chemist, at Notting Hill, less 5*l.* paid.—Plaintiff was traveller for Messrs. Silverlocks, chemists' printers, and calling on defendant was asked by the latter if he could get him a purchaser for his business. Plaintiff said defendant offered to take 650*l.*, everything included, and would pay plaintiff a commission of 7½ per cent. Plaintiff wrote to Mr. Raynor, who communicated with Mr. Bumpstead, who bought the business. On plaintiff sending in a note of his claim he received an answer stating that defendant would shortly see him and settle his indebtedness, but would have had nothing to do with him if he had known that plaintiff was a chemists' agent. Defendant afterwards sent plaintiff a 5*l.* note.—Defendant denied that he undertook to pay plaintiff any commission. Had promised that if plaintiff got him a purchaser at 650*l.* he (defendant) would make him a present.—His Honour gave judgment for plaintiff, with costs.

RACKHAM'S PATENT MEDICINES.

In the Chancery Division of the High Court of Justice on January 16, Mr. Chitty, Q.C., moved, on behalf of the plaintiff in a case of Smith v. Rackham, for an injunction to restrain the defendant from advertising, vending, selling, or offering for sale a number of medicines, which he described as Rackham's cough pills, castor-oil pills, gout pills, and tonic compound pills, and several others which were named. According to the statement, which was an *ex parte* one, the plaintiff purchased the defendant's business, and paid him the money for it, and a deed was executed to that effect, which purported to vest in the plaintiff all the defendant's patent medicines and trade-marks, and the defendant undertook not to manufacture at any time thereafter, as principal or agent, any of the said medicines, or in any way use the said trade-marks or names without the consent, in writing, of the plaintiff; and that he would not, either directly or indirectly, vend the said medicines or any such articles, except as Mr. Smith might sell to him. The Master of the Rolls: And you have not sold him any? Mr. Chitty: No. The learned counsel went on to say that the defendant had flooded the market with hand-bills of his medicines, representing them as his. Hand-bills to the number of some 20,000 had been circulated. The Master of the Rolls, after looking at the bills and advertisements, said Mr. Chitty might take an injunction. He was not sure that he was not entitled to ask for more than he did ask—to restrain him from holding himself out as the proprietor of the medicines. He would grant an *ex parte* injunction in terms of the claim.

The action for restraining Mr. Rackham from infringing the names and trade-marks which he had sold came before the Master of the Rolls again on January 30.—Mr. Chitty, Q.C., said that the defendant had consented to the injunction being made perpetual, and would pay the costs.—Mr. Buckley, for the defendant, would give up everything.—The Master of the Rolls said he must say that he did not give up anything.—Mr. Chitty: Not even his pills. The injunction would be made perpetual, and a decree drawn up to that effect, and so an end be made to the action.—The Master of the Rolls, after conferring with the Registrar, said the Registrar would not accept it that way. They did not do business in that style in the Registrar's office. The case would have to be set down in regular form for the decree to be pronounced.

STEALING CHEMICALS.

At the Central Criminal Court on January 15, before the Recorder, Henry Harbard, 40, and William Stephens, 24, were indicted for stealing 100 lbs. of certain powders from Messrs. May & Baker's chemical works at Battersea. Mr. Poland conducted the prosecution, and the prisoners were defended by Mr. Spratt. Harbard had been employed at these works for about ten years until three years ago, when he was discharged because he had taken to drink. Last June he and Stephens were charged at Greenwich Police Court with being in illegal possession of a white powder, then believed to be, as they had stated, white lead. The prisoners said they had taken it for a debt. They were on that occasion remanded for a fortnight and afterwards discharged, and the bags containing the powder returned to them. A witness named James Carpenter, who was training Stephens for a running match, said that the prisoners had asked him if he could dispose of some pepsine, some red and white precipitate, and some calomel. The pepsine Stephens said he got from Morson's, the mercurials from May & Baker's. The former he said he got through a "pal"; the latter, when the police were changing. Stephens said, "You can have any amount of red precipitate and white calomel, as we can get any amount of it; we have already filled up, our customers." Carpenter communicated with the police and on their advice he agreed to meet prisoners and take from them some calomel. The prisoners brought some to Waterloo Station, where Carpenter and an inspector awaited them, and they were taken into custody. Mr. William Garrad Baker and Mr. Thomas Tyrer, partners in the firm of May & Baker, proved that their November stock of calomel was deficient to the extent of 103 lbs. The calomel was unfinished: that is, not sifted. Both partners believed the powder produced was of their manufacture. There were distinct appearances by which they could identify it. Mr. Baker said they had not missed any before. They manufactured tons of it, and a hundredweight would not be easily missed unless they checked the books. Mr. R. Taubman, manager for Messrs. Morson & Son, said that some bottles of pepsine found at Stephens' place were theirs, but he could not say that they had not been bought. One of the empty bottles had been put up for export trade, and would not be likely to be purchased for retail.

The prisoners, in defence, endeavoured to prove that the calomel which they brought to Carpenter was the same powder as that which they had when taken into custody at Greenwich. The jury, however, found them guilty, and the Recorder, after severely commenting upon the infidelity of servants generally, and observing, that these men had, without doubt, tampered with the fidelity of this firm's employés, sentenced them each to five years' penal servitude.

INFRINGEMENTS OF THE PHARMACY ACT.

ILLEGAL SALE OF POISONS—SALE OF BATTLE'S VERMIN-KILLER BY A GROCER.

At the Newcastle-on-Tyne Borough Police Court on January 15, William Wright Brewis, grocer and patent medicine vendor, of 1 New Street, was summoned by the secretary of the Chemists and Druggists' Trade Association of Great Britain for contraventions of the Pharmacy Act 1868. He was charged with having unlawfully sold to W. F. Haydon certain poison, to wit, Battle's vermin-killer, being a preparation of strychnine, in a certain packet the cover of which packet did not set forth the name or address of the seller of the same. That the said sale was effected, the purchaser being unknown to the seller and not introduced to the seller. That the date of the sale, the name and address of the purchaser, and the name and quantity of the article sold were not entered by the seller in a book kept by him for that purpose, contrary to the statute in such case made and provided.

Mr. George Rowell, solicitor, Newcastle, who appeared for the defence, said he should advise his client to plead guilty.

Mr. Glaisyer, of Birmingham, having stated the case to the Bench,

Mr. Rowell said:—In this case I shall ask your worships to impose a merely nominal penalty—My client is a grocer carrying on an extensive business in this town. Some little

time since he took out a licence to enable him to sell patent medicines and such like articles. By accident one of the articles of which he then took into stock, a very small quantity indeed—half-a-dozen packets, I believe, was the actual quantity—was Battle's vermin-killer. It is a well-known article, sold hundreds of times every day, in the way my client has sold it, for domestic purposes, and not at all for medical purposes. A private detective goes to his shop and buys a packet of this poison, and thereupon three summonses are issued against my client.

Chairman of the Bench: You made use of an observation that a private detective went to your client's shop and bought this poison, whereas the purchase was made by the complainant himself.

Mr. Rowell: Mr. Haydon is the secretary of the Chemists and Druggists' Trade Association, and I have no doubt he makes it his duty to get up prosecutions of this kind.

Chairman of the Bench: That is quite another matter.

Mr. Rowell: I hardly think that my friend means to ask for more than one conviction.

Chairman of the Bench: Your remarks as to this poison being sold in hundreds of cases in the same manner in which it has been sold by your client is not only no reason why your client should not be punished, but rather the contrary; and we must say that we are sorry to find from your statement that there are numerous instances in which the law has been broken and the public safety endangered. Every week almost there are persons poisoned by taking this vermin-killer, and if your client reads the papers he must have seen these cases, and he ought therefore to have been much more cautious as to his sale.

After conferring, the Chairman said the magistrates would impose a penalty of 40s. and costs in the case of one summons, and the defendant must pay costs in the case of the other two summonses.

SALE OF POISON BY AN UNQUALIFIED CHEMIST.

At the Leeds Borough Police Court on January 16, before W. Bruce, Esq., stipendiary, Hubert Murray, trading as a chemist and druggist, at 110 Kirkgate, Leeds, was charged with having on October 29, 1879, unlawfully sold to W. F. Haydon, oxalic acid, in a certain packet the cover of which packet did not set forth the name of the seller of the same, contrary to the statute in such case made and provided.

The defendant pleaded not guilty.

Mr. Glaisyer: I appear to prosecute in this case, instructed by the secretary of the Chemists and Druggists' Trade Association of Great Britain, by whom the information is laid. The summons is issued under the provisions of the 17th section of the Pharmacy Act, 1868. The facts of the case are shortly these:—On October 29 last Mr. Haydon went to the defendant's shop, No. 110 Kirkgate, Leeds, and purchased from an assistant, who gave the name of Backhouse, two pennyworth of oxalic acid. The packet was labelled "Oxalic Acid. Poison. Edward Boothman, Druggist, 110 Kirkgate, Leeds." The parcel was subsequently analysed by Mr. Haydon and found to contain oxalic acid. Oxalic acid is a poison enumerated in Part 2, Schedule A of this Act. The defendant is wholly unqualified to sell poisons scheduled under the Act, not being a registered chemist and druggist, but he attempts to do so under cover of Boothman's name; Edward Boothman, a registered chemist and druggist, who formerly owned the business now being carried on by the defendant, has been dead some years. The defendant is the tenant of the premises at 110 Kirkgate; he has been regularly rated for those premises, and has paid rates for many years.

Mr. Haydon having proved the facts as stated by Mr. Glaisyer,

The Defendant said: I am not a chemist, I admit that; but I thought I had done all that was necessary in carrying on my business by means of a qualified man.

The Stipendiary: Do you say your assistant is a qualified person?

The Defendant: He is not a registered chemist and druggist, but he has had a great deal of experience. We sell very little indeed of this oxalic acid.

The Stipendiary: In this case the defendant is charged with selling poison which is not labelled with the name of the seller—

The Defendant: It is labelled with Boothman's name, and I am carrying on the business in Boothman's name.

The Stipendiary: That is so; but that is just what the law says you must not do. The full amount of the penalty appears to be 5*l*. I shall order in this case that you pay a penalty of 50*s*. and costs.

The Defendant: Can't you mitigate the penalty, your Worship?

The Stipendiary: You don't appear to understand me; the full penalty is 5*l*., and I have reduced it to half that amount. You must understand that every day you carry on this business you are trading in an illegal manner, and are liable to be sued for penalties for trading as a chemist without qualification.

The Defendant: Then what am I to do with my business?

The Stipendiary: You must obey the law, or you will have the Pharmaceutical Society or some other body suing you for further penalties.

ATTEMPTED EVASION—EXTRAORDINARY EVIDENCE.

At the Birmingham Police Court on Thursday, January 22, before A. Hill, Esq. (chairman), Alderman Biggs, and A. J. Elkington, Esq., Thomas Theophilus Hutchinson, trading as a chemist and druggist at 23 Summer Lane, Birmingham, appeared to answer a summons taken out by the Secretary of the Chemists and Druggists' Trade Association of Great Britain, for an infringement of the 17th section of the Pharmacy Act. He was charged "That he did, on the 2nd inst., unlawfully sell to W. F. Haydon a certain poison, to wit, oxalic acid, in a certain packet, the cover of which packet did not set forth the name of the seller of the same." The defendant pleaded guilty to selling the poison, but said he sold it on behalf of his employer, Mr. Thomas Powers, a registered chemist and druggist.

Mr. Glaisyer, in opening the case, said that Mr. Haydon went to the shop of the defendant, at 23 Summer Lane, on the 2nd inst., and there purchased two pennyworth of oxalic acid from the defendant himself. The packet was labelled "Poison—oxalic acid. T. Powers, dispensing chemist, 23 Summer Lane, Birmingham," and the contents were subsequently analysed by Mr. Haydon, who found it to contain oxalic acid, which is a poison enumerated in Part 2, Schedule A of the Pharmacy Act, 1868. According to the 17th section of that Act, which is the section on which this prosecution is based, and which was read by Mr. Glaisyer, the defendant is not authorised to sell poisons.

Defendant: I beg your pardon; I may sell poison for my employer if he is a registered chemist and druggist, I suppose.

Mr. Glaisyer: The defendant not being a registered chemist and druggist is not qualified to sell poisons, and to get over this difficulty he trades under the name of Powers. Powers, I believe, has nothing whatever to do with the business, but is otherwise engaged at Stratford-on-Avon, where he resides. I understand the premises at 23 Summer Lane are rented by the defendant, and that he pays all the rates and taxes.

Chairman of the Bench: You say the defendant is the tenant.

Mr. Glaisyer: That is so. If the defendant disputes this I shall ask for an adjournment to produce the necessary witnesses to prove it.

Defendant: I have been in the trade nineteen years, and during that time I have sold poison for my employer. He opened the shop in Summer Lane and engaged me to manage the business.

Mr. Biggs: It is stated you are the tenant?

Defendant: I pay the rates indirectly.

Mr. Biggs: Do you raise a question by saying you are not the tenant—do you admit the tenancy?

Defendant: Yes, I do.

Mr. W. F. Haydon, having proved the purchase and the analysis of the oxalic acid, said the defendant was not qualified to sell such poison, his name not appearing in the last-published register of pharmaceutical chemists and chemists and druggists. The name of Thomas Powers appeared on that register as residing at 8 West Street, Stratford-on-Avon. He had made a journey to Stratford-on-Avon, and called at 8 West Street. It was a private house, and the lady whom he saw there informed him that Mr. Powers resided there, but

was not at home, and that Mr. Powers was a dispenser to a Mr. Lucy, a surgeon practising in the town.

Magistrates' Clerk: Have you seen Mr. Powers?

Mr. Haydon: I have not.

Defendant: Why did you not make it your business to see him?—He would have told you it was his business, and that I managed it for him.

Mr. Haydon: I have no doubt he would.

Defendant: Mr. Powers has speculated 250*l.* in this business, and will come forward and say it is his business.

Chairman of the Bench: Is he here?

Defendant: No, sir.

Chairman of the Bench: Do you wish an adjournment?

Defendant: Yes.

Mr. Glaisyer: I have no objection to raise to the case being adjourned.

Chairman of the Bench: We adjourn the case for a fortnight.

The adjourned hearing of this case came before the same magistrates, in the same Court, on February 5, 1880.

Mr. Thomas Powers was called and sworn.

Magistrates' Clerk: What have you to say, Mr. Powers?

Witness: My name is Thomas Powers, and I am a registered chemist and druggist.

Cross-examined by Mr. Glaisyer.

Where do you carry on business, Mr. Powers?—In Summer Lane, at No. 23.

You don't reside there, do you?—No; Mr. Hutchinson manages my business for me.

Where do you reside?—At Stratford.

In what capacity are you there engaged?—I am doing nothing now.

What interest have you in this business at Summer Lane?

—He manages the business for me.

On what terms are those premises held in Summer Lane?

—I don't know what you mean.

What is the nature of the tenancy of the premises in Summer Lane?—They are taken yearly.

Have you taken the premises yearly?—No; Mr. Hutchinson took them.

In your name?—Yes.

You did not take the premises yourself?—No.

When were the premises taken?—I don't exactly know.

What rent do you pay?—That I don't know.

What are the premises rated at?—I don't know; I have troubled nothing about the matter.

Do you know who is the landlord?—No.

Chairman of the Bench: And yet you call this your business?

Mr. Glaisyer: Does the Bench consider that I need proceed further?

Chairman of the Bench: I think not.

Mr. Elkington: Have you ever had any profits from the business?—Yes, sir.

Chairman of the Bench: Have you ever taken any part in directing or conducting the business?—No, I left it entirely to Mr. Hutchinson: he took the business, and I lent him my name.

How much money did you find for it?—About 200*l.*

Has he repaid that?—No; he pays me interest for it.

Mr. Elkington: It is a mere loan of capital and nothing else.

Defendant: In 1867 we saw a good place for opening a chemist's shop. Mr. Powers found everything, and placed me there as his assistant; and he derives a certain amount of profit.

Mr. Elkington: He said he lent you the money.

Defendant: It is his business until the money is repaid.

Mr. Elkington: He said you paid him interest.

Defendant: He must have made a mistake.

In reply to further questions from the magistrates, the defendant said the profits of the business were divided between himself and Powers, but that he had no balance-sheet, and as unable to produce any written agreement that they had a share.

The Bench considered the case proved, and fined the defendant 20*l.* and costs.

THE NAME-LENDING SYSTEM—ANOTHER CONVICTION

At the Birmingham Police Court, on Thursday, January 1880, before A. Hill, Esq. (chairman), Alderman Biggs, a A. J. Elkington, Esq., Theodore Morris, trading as a chemist and druggist at 199 Lodge Road, Birmingham, was summoned by the Secretary of the Chemists and Druggists' Trade Association of Great Britain for an infringement of the 17th section of the Pharmacy Act, 1868. He was charged with having, on the 2nd inst., sold laudanum to W. Haydon, in a bottle, the label of which did not set forth the name of the seller of the same.

Mr. Henry Glaisyer, solicitor, Birmingham, appeared to prosecute. The defendant conducted his own defence.

Mr. Glaisyer, having explained the section of the Pharmacy Act on which the summons was based, said: On the second day of this month Mr. Haydon purchased at the shop of the defendant, 199 Lodge Road, two pennyworth of laudanum. The bottle was labelled "Poison, Laudanum, R. D. Hughes, chemist, 199 Lodge Road." The contents of the bottle were subsequently analysed by Mr. Haydon, and found to contain laudanum, a preparation of opium. Opium and its preparations are enumerated in Part 2, Schedule A, of the Act. The defendant is wholly unqualified to sell poisons schedule under the Act, not being either a pharmaceutical chemist or a chemist and druggist; but he appears to do so under cover of Hughes' name. The defendant is the tenant of the premises at 199 Lodge Road, and has paid rates for those premises.

Mr. W. F. Haydon, having proved the purchase of the laudanum as stated by the solicitor, said that defendant's name did not appear in the last published register of pharmaceutical chemists or chemists and druggists. The name of Richard David Hughes appeared on that register as chemist and druggist residing at 18 High Street, Denbigh.

Magistrate's Clerk: You do not deny selling this poison, suppose?

The Defendant: No, but there is the name of the proprietor on the bottle.

Chairman of the Bench: How long have you been at the shop?

The Defendant: Eighteen months.

Chairman of the Bench: Was the shop taken in Mr. Hughes' name?

Defendant: No, I opened it as a druggist.

Magistrate's Clerk: Did Hughes ever live on those premises?

Defendant: No, but he has been backwards and forwards to Birmingham.

Mr. Elkington: Are you Mr. Hughes' assistant, and paid by him as such?

Defendant: I am a salaried assistant, and over a certain sum all the money made out of the business belongs to me. I am the tenant of the premises, and pay the rent, rates, and taxes.

Chairman of the Bench: Do you ask for an adjournment to call Mr. Hughes as a witness? If not we must decide the case on the evidence given.

Defendant: I would rather the case was settled now.

Chairman of the Bench: You must pay a penalty of 2*l.* and costs, or, in default, one month's imprisonment. I hope full publicity will be given to this case.

PROSECUTION BY THE PHARMACEUTICAL SOCIETY UNDER THE 15TH SECTION OF THE PHARMACY ACT.

At the Birmingham County Court, on February 6, 1880, before Mr. Motteram, Q.C., Judge, Joseph Guest Earp, trading as a chemist and druggist, at 22, 23, and 24 Cheapside, Birmingham, was sued by the Council of the Pharmaceutical Society of Great Britain, by Mr. E. Bremridge, the Secretary of the said Society, by the authority of the said Council, for an infringement of the Pharmacy Act. The particulars given on the summons were as follows:— "To amount of penalty incurred by the defendant on July 29 and August 12, 1879, in selling and keeping open shop for the retailing, dispensing, or compounding of poisons or poison, contrary to the provisions of the Pharmacy Act, 1868, 31 and 32 Vict. cap. 121. Penalty 5*l.*" Mr. Grainger (instructed by Messrs. Flux, Slade & Co., solicitors, London) appeared for the plaintiffs, and Mr. Stubbs

(structed by Mr. Cheston, solicitor, Birmingham) appeared for the defence.

Mr. Stubbins: Allow me, before the case is gone into, to draw your Honour's attention to the particulars given in the summons; they neither state what was the poison sold, nor do they give us any information as to the person to whom the poison was sold. There is no information as to whether it was selling or keeping open shop for the sale of poison, whether it was dispensing poison, or whether it was compounding poison, that constitutes the offence for which the penalty is demanded.

Mr. Grainger: This action is taken under the 15th Section of the Pharmacy Act, 1868. The words of the Act of Parliament are as follows:—"From and after December 31, 1868, any person who shall sell or keep an open shop for the retailing, dispensing, or compounding poisons, or who shall take, use, or exhibit the name or title of chemist and druggist, &c. . . . shall for every such offence be liable to a penalty or sum of 5*l.*, and the same may be sued for, recovered, and dealt with in the manner provided by the Pharmacy Act for the recovery of penalties under that Act; and nothing in this Act contained shall prevent any person from being liable to any other penalty, damages, or punishment to which he would have been subject if this Act had not passed."

The Judge: That means, you know, that each of those things is an offence against the statute; but you must state specific offence, and if more than one offence has been committed, you should state each of them.

Mr. Grainger: We rely upon the defendant having kept an open shop for the sale of poisons.

The Judge: What you say is this: the defendant has sold poison, but you do not state what poison, and so long as it is a poison within the meaning of this Act, I do not think it matters much that he has also kept open shop for the retailing, dispensing, or compounding of poisons. Then, as to the name of the purchaser, if Mr. Stubbins wanted the name of the purchaser he should have asked for it.

Mr. Stubbins: I have followed the usual rule of this Court.

The Judge: If the question raised is important, I shall take time to look it up; at the present I cannot see it is of importance whether the poison was sold to Smith, Jones, or Robinson.

Mr. Stubbins: I hold in my hand a conviction against my client by the magistrates under this same Act of Parliament, and it is very important that I should have full particulars upon which this prosecution is based. We are charged here with no specific offence, but with selling and keeping open shop for the retailing, dispensing, or compounding of poison or poisons; but what it is my client has sold or kept open shop for retailing, dispensing, or compounding, or to whom he sold, or for whom he dispensed or compounded poisons, is not mentioned in the summons.

The Judge: You are charged with all those things, and if it is found you did any one of them you are subject to the penalty claimed. One penalty only is sued for. You say, I don't know the name of the purchaser; you will know the name of the purchaser, and if, after that name is given you, you find any difficulty I will hear what you have to say.

Mr. Grainger: I will give my friend the name. Mr. William Frederic Haydon was the purchaser of the poison.

Mr. Stubbins: We are still without the name of the poison sold.

The Judge: I think it would have been better if the charge had been more specific as to the offence committed, but I do not see, Mr. Stubbins, in what way your client's case is prejudiced by the omission of the particulars you have named. If you had asked for particulars, and particulars had been refused by the other side, you would have been entitled upon that to an adjournment at their cost, or you might have served interrogatories; you have done neither, but have laid quietly by until the case is called on; then you say "I have not been furnished with the name of the purchaser," although it does not matter whether it is Smith or Jones. Mr. Grainger gives you the name, then you say you have not the name of the poison; well, I have no doubt Mr. Grainger will tell you that also. I will not allow the defendant to go to trial if you can show me that

he will be seriously affected by fuller particulars not having been given, but I cannot yet see that he will be in any way prejudiced. Be good enough to say in what form you would like the declaration amended, and then I will see if I can allow that alteration to be made.

Mr. Stubbins: It is not for me to do that.

Mr. Grainger: I am quite willing to take this offence only, that is to say the keeping open shop for the retailing, dispensing, and compounding poisons, and I will not go into any other offence.

Mr. Stubbins: Then, my friend, in doing that does not follow the words of the statute, which are, "keeping an open shop for the retailing, dispensing, or compounding poisons." They are separate offences, and I must know what is the particular offence my client has committed, as he has already been fined before the magistrates for an infringement of this Act.

Mr. Grainger: The conviction referred to by my friend was under the 17th Section of the Act, that section imposes penalties for improper labelling of poisons. That is quite a distinct offence. A conviction in the Police Court under the 17th Section can have nothing whatever to do with an action in this Court under the 15th Section.

The Judge: Are you prepared to prove all this, that the defendant sold poison and kept an open shop for the retailing, dispensing, or compounding poisons.

Mr. Grainger: I can prove that poisons were bought in the defendant's shop, and therefore it follows that he must have been keeping open shop for the retailing of poisons.

The Judge: If you are able to prove both offences it is one thing, if only one of them that is another. I think you must amend the summons in some way. Put it in a way that you are able to prove it.

Mr. Stubbins: It will be in my opinion a great prejudice to the defendant to have these particulars amended at this stage. I call this a persecution and not a prosecution at all. My client is first of all fined by the magistrates, and then—

The Judge: I will not listen to that.

Mr. Stubbins: I must say this, that my client having been proceeded against at the Public Office—

The Judge: I know nothing about that. If you can satisfy me that your client is in any way prejudiced I will give you every facility for placing him in a position to go to a fair trial.

Mr. Stubbins: What are we charged with? We don't know what we have to answer.

The Judge: You are making a fuss about nothing.

Mr. Stubbins: Had the name of the purchaser been given in this case we should then have served interrogatories, and I should have interrogated for a special purpose.

Judge: The amended summons is as follows:—"To amounts of penalty incurred by the defendant for keeping open shop for the retailing and selling of poisons as a poison contrary to the provisions of the Pharmacy Act, 1868 (31 & 32 Vict., cap. 121), to wit on July 29, 1879, to one William Frederic Haydon one pennyworth of oxalic acid and one pennyworth of white precipitate, and on August 12, 1879, to the same person one pennyworth of oxalic acid, defendant not being a duly registered pharmaceutical chemist or chemist and druggist." What can you want more than that?

Mr. Stubbins: We didn't have that before.

The Judge: But you have it now, and you can interrogate if you like. I cannot meet those matters which you don't choose to tell me. If you show me that you are prejudiced, I will take care that you are not.

Mr. Grainger: The plaintiffs in this case are the Council of the Pharmaceutical Society of Great Britain, and the charge against the defendant is that of keeping an open shop for the retailing, dispensing, or compounding poisons. As I have already informed your Honour, it is an action brought under the Pharmacy Act, 1868, for the recovery of a penalty of 5*l.* I shall be able to prove to you that Mr. Haydon, who is a pharmaceutical chemist, went to the defendant's shop, 22, 23, and 24 Cheapside, in this city, on July 29 of last year, and there purchased a pennyworth of oxalic acid and a pennyworth of ammoniated mercury or white precipitate powder, and that on a subsequent occasion, on August 12 of the same year, he purchased from the same shop a pennyworth of oxalic acid. The defendant's name is

over the door of the shop, and the packages in which those poisons were sold were labelled with the name and address of the defendant. Mr. Haydon has analysed the contents of these packages, and he will tell you that he found them to contain oxalic acid and ammoniated mercury, both of which poisons are poisons within the meaning of this Act. I shall prove to you by the register of pharmaceutical chemists and druggists, which is evidence of itself, that the defendant's name does not appear in that list. The 13th section of the Act provides, "And the absence of the name of any person from such printed register shall be evidence, until the contrary shall be made to appear, that such person is not registered according to the provisions of the Pharmacy Act or of this Act."

Mr. W. F. Haydon was called, and proved the facts as stated by Mr. Grainger. On the first occasion the oxalic acid was labelled with the word "poison" only, the white precipitate powder was labelled "white precipitate, poison, Joseph G. Earp (late Buszard), druggist, 22, 23 and 24 Cheap-side, Birmingham." On the second occasion he purchased a pennyworth of oxalic acid, which was labelled with the word "poison" only. He had analysed the poisons, and found oxalic acid and white precipitate powder respectively. The defendant's name is over the door of his shop, but it does not appear in the last published register of pharmaceutical chemists and chemists and druggists.

Cross-examined by Mr. Stubbins: Have you ever taken out a summons against the defendant?—Yes, in the Police Court, in my official capacity of secretary to the Chemists and Druggists' Trade Association.

And the defendant was fined, I believe?—Yes, 1*l.* and costs.

When was that summons taken out?—I cannot remember the exact date; it would be in October, I believe.

Your memory is pretty good as to the dates on which you visited the defendant's shop to make these purchases, but you cannot remember when you sued my client in the Police Court?—The dates on which I purchased the poisons at the defendant's shop were placed upon the packets purchased at the time of purchase, and are still there.

Did you take out the summons after August 12?—Yes.

And you sued my client on one of the packets of poison mentioned in the amended summons, on which a penalty in this Court is now asked for?—No, that is not so. I sued the defendant in the Police Court under the 17th section of the Pharmacy Act, for having sold to me on August 8 last, a certain poison, to wit oxalic acid, the cover of the packet of which poison did not contain the name and address of the seller of the same.

Mr. Grainger: That is my case.

Mr. Stubbins: There is no proof that the defendant has sold poison.

Mr. Grainger: I have proved that the defendant kept an open shop, and that poisons were sold at that shop.

Mr. Stubbins did not address the Court for the defence.

The Judge: I find a verdict for the plaintiffs with costs.

In re JOHN COOKE.

THE debtor filed his petition in March last, describing himself as of 126 Hoxton Street, chemist and druggist, and dealer in photographic chemicals and apparatus. He furnished a statement of affairs showing liabilities to the amount of 1,669*l.* 17*s.* 10*d.*, and assets 1,560*l.* 15*s.* 11*d.*, the following being the principal creditors:—

	£	s.	d.
Albion Albuminising Company, Hammersmith ..	52	12	3
Atkinson, J. T., 33 Manchester Street, Liverpool ..	55	12	10
Bishop, W., 174 St. John Street, E.C. ..	86	13	11
Bowerbank, E., & Sons, Sun Street ..	19	9	9
Charcnett & Laverne, Paris ..	33	5	0
Clarke, J., & Son, Birmingham ..	124	5	11
Cooke, Miss Jessie, High Street, Hoxton ..	18	0	0
Dallmeyer, J. H., 19 Bloomsbury Street ..	10	0	0
Distloffe, G., Berlin ..	147	3	6
Edwards, J., Dale Hall, Burslem ..	41	3	5
Greenwood, H., York Street, Covent Garden ..	26	6	9
Hodgkinson, Stead & Treacher, Aldersgate Street ..	50	18	10
Houghton, George, & Son, High Holborn ..	25	9	3
Huggon & Co., Park Row, Leeds ..	10	2	6
Howards & Sons, High Street, Stratford ..	38	19	5
Hutinet, D., Paris ..	91	10	9
Hyam, David, & Co., Houndsditch ..	19	5	5
Johnson, Matthey & Co., Hatton Garden ..	174	1	2
Johnson & Sons, Cross Street, Finsbury ..	39	13	3
Jones, Joshua, Fulwood Rents, Holborn ..	13	8	9
Morley, J. & R., Wood Street ..	16	3	2
Maw, Son & Thompson, Aldersgate Street ..	21	5	6
Mander, Elisha, & Son, Birmingham ..	11	17	9
Mawson & Swan, Newcastle-on-Tyne ..	about	38	4
Macintosh, Charles, & Co., Bread Street, E.C. ..	10	5	9
Neustadt, Max, & Co., Mincing Lane ..	64	4	4
Piper & Carter, Gough Square, E.C. ..	13	4	8
Photographic Vessels, The, Gough Square, E.C. ..	13	0	0
Ross & Co., New Bond Street ..	30	9	6
Sewell & Crowther, Strand ..	35	0	10
Treble, George, & Son, Gloucester Street, N. ..	30	0	0
Taylor, G. D., 7 Queen's Place ..	25	0	0
Taylor, A., 153 Regent Street ..	10	19	3
Taylor Brothers & Fox, Crown Buildings, E.C. ..	12	0	0
Thomas, R. W., 10 Pall Mall ..	29	3	5
Trapp, L., & Co., Budge Row, E.C. ..	14	3	6
Wiss, C., King Edward's Place, Birmingham ..	61	15	6

The case was brought before Mr. Registrar Murray on January 26, upon the hearing of an application by Mr. Maitland on behalf of the debtor to restrain proceedings against him in an action at the suit of Mr. Max Neustadt, wholesale chemical merchant, 25 Mincing Lane. Under the petition filed by the debtor resolutions had been passed for the acceptance of a composition of 13*s.* 4*d.* in the pound, payable by certain instalments, and the same were duly registered. It was submitted that the creditor was bound by the resolutions, and that the action could not be allowed to proceed. Mr. Theodore Lumley opposed the application, and said it was alleged that the debt had been contracted by fraud. Mr. Maitland denied the allegations of fraud, and contended that some *prima-facie* case ought to be made out before the creditor was allowed to proceed with his action. His Honour, however, held that as fraud was alleged the question would have to be decided in the action and not by the Court. He therefore declined to grant an injunction, and reserved the costs.

In re HARRISON & YOUNG.

THE adjudication in this case was made upon the petition of Lloyd's Banking Company, Birmingham; the bankrupts being described as of Abbey Lane, West Ham, manufacturing chemists, and the first meeting under the bankruptcy was held on the 3rd inst., before Mr. Registrar Brougham. The statutory accounts were not filed, but the following creditors proved against the estate:—

	£	s.	d.
Lloyd's Banking Company ..	1,297	17	7
Walker, W. & F., Ida Street, Limehouse ..	38	5	4
The Pooley Hall Colliery Company, Stratford Bridge ..	36	5	4
Hands, John, & Sons, Birmingham ..	24	2	0

Resolutions were passed for the appointment of Mr. C. A. Harrison, accountant, of London and Birmingham, as trustee, together with a committee of inspection, and March 4 was the date fixed for the bankrupts' public examination.

In re C. J. WRIGHTSON.

THE debtor was a lentilla manufacturer, carrying on business at 21 Cardington Street, under the firm of "James & Co." He had filed a petition for liquidation, and Mr. Finch applied last month for registration of the resolutions passed

Bankruptcies and Liquidations.

HENRY LESSEY BLORE, Manchester.

A MEETING of the creditors of Henry Lessey Blore, carrying on business at 1 Withy Grove, Manchester, as a wholesale grocer, and at 46 Oldham Road, under the style or firm of "Jonathan Brown & Co.," as a druggist and drysalter, was held on January 23 at the offices of Messrs. Farrar & Hall, 79 Fountain Street, solicitors. The statement of affairs prepared by the receiver, Mr. J. A. Eastwood, 49 Princess Street, accountant, showed liabilities to unsecured creditors, 3,890*l.* 11*s.* 6*d.*; creditors fully secured, 6,625*l.*; value of securities, 8,350*l.*; surplus to second mortgagee, 1,725*l.*; creditors partly secured, 10,536*l.* 19*s.* 5*d.*; value of securities, 4,625*l.*; creditors for rent, rates, taxes, &c., 26*l.* Assets, consisting of fixtures, fittings, and furniture, 505*l.*; stock-in-trade, 1,804*l.* 18*s.* 10*d.*; book debts, estimated to produce 3,011*l.* 11*s.* 11*d.*; cash in hand, 800*l.* Liquidation was resolved upon, Messrs. Eastwood & Eekersley being appointed trustees with a committee of inspection.

by the creditors. The liabilities were returned in the accounts at 1,767*l.* 15*s.*, and assets 293*l.* 9*s.* 8*d.* It was resolved that the estate should be liquidated by arrangement, Mr. James Boyes, accountant, Poultry, being appointed trustee, together with a committee of inspection. Mr. Registrar Pepys, in the absence of any substantial objection, directed registration.

Personalities.

SOCIETY OF PUBLIC ANALYSTS.—At the general anniversary meeting, held at Burlington House, on January 14, Dr. Muter was re-elected president for the ensuing year.

MR. ARCHIBALD, of Workington, retires from the business he has carried on there, and is succeeded by Mr. William Bownes.

MR. W. E. MILLARD, formerly associated with Messrs. R. H. Millard & Sons, has established himself at 17 Farringdon Road, where he works Mrs. Batchelor's hair colour restorer and some other specialties.

MR. JOHN SELLERS, lately a partner in the firm of Mackey & Sellers, is now carrying on business by himself at 17 Farringdon Road as a manufacturer of select pharmaceutical preparations and a few specialties, such as mist. bismuthi co. and quinquinine.

MR. G. D. MACDOUGALL has been appointed public analyst for Perthshire. Mr. J. Napier has been appointed public analyst for the borough of Ipswich, and also for East Suffolk. Mr. Carter Bell has been appointed public analyst for Stalybridge.

MR. BRYANT, of the firm of Bryant & May, has agreed to present a statue of Mr. Gladstone to the East-end of the Metropolis, which is to be executed in Sicilian marble, and will be erected either on the space in front of Bow Church or the space in front of the Bow Vestry Hall.

ONE of two prizes of 50*l.* each, offered by the president of the Institute of Chemistry of Great Britain and Ireland, for the best original researches involving gas analysis, has been awarded to Mr. Leonard Dobbin, son of Mr. William Dobbin, North Street, Belfast, who is at present studying at the University of Würzburg, Bavaria.

FRANK WILTON, who on January 20 was sentenced at the Central Criminal Court to eight months' imprisonment as a fraudulent bankrupt, was previously well known in the wholesale drug trade. After being an assistant for some years with Messrs. Burgoyne & Burbidge, he commenced business on his own account as an export merchant, but after ten months' trading he failed with a deficit of over 9,000*l.* This occurred in the spring of 1878. His subsequent transactions in the woollen trade have brought him within the scope of the criminal law.

DR. S. S. WHITE, of Philadelphia, whose death at Paris we mentioned last month, was the chief maker of teeth and dental apparatus in the world. His factory in Philadelphia cost half a million dollars to build, and in it 300 hands are employed, and 4,000,000 teeth are sent out from it annually. Dr. White was the proprietor of the *Dental Cosmos*, and for many years had exercised a powerful influence on the dental literature of his country. His manufactures took the highest diplomas at several of the chief international exhibitions of the past ten years. The father of the late Dr. S. S. White died when the latter was only eight years of age, and the widow, assisted by her son, kept herself and family by a candy store in Burlington, New Jersey. At the age of 14 the lad got into the establishment of an uncle, who was a dentist and manufacturer of artificial teeth, and his subsequent career and brilliant success followed as the result of a thorough mastery of his business. At his death his property was estimated at 1½ million of dollars.

MYSTERIOUS DISAPPEARANCE.—The following appeared in the *Daily Telegraph* of the 12th inst.:—A correspondent writes: "On Saturday, the 24th ult., at about 8 P.M., Edwin Godfrey Chipperfield, aged 17, of small stature, 5 feet 2 inches, and of a timid and nervous disposition, left the house of his employer, Mr. Lowe, pharmaceutical chemist,

Surbiton, which is close by the railway station, intending to journey, *via* Waterloo and Farringdon Street, to his father's residence at New Barnet, with the purpose of spending Sunday with his family, which he was accustomed to do once a month, and has not been heard of since. He was wont to walk the distance between Waterloo and Farringdon Street Stations. The only articles of value he had about him were a silver watch, a gold scarf-pin, and some 8*s.* in silver. He carried a small leather bag, with his name engraved on its nickel lock, which might readily have been mistaken for silver. He was about the last lad voluntarily to absent himself, even if he had had the pecuniary means."

MARRIAGE.

HERRING—GWILLIAM.—On January 15, at Christ Church, Whitley, Reading, by the Rev. Dr. Stanley, Principal Chaplain H.M.'s Forces, Aldershot Camp, assisted by the Rev. Matthew Powley, Vicar of the parish, Henry William Herring, of Lawn House, Barnet, and Aldersgate Street, London, eldest surviving son of the late Rev. Henry Lee Warner Herring, formerly of Wood House, Stanstead, Essex, to Frances, youngest daughter of S. Gwilliam, Esq., of Reading.

Materia Medica.

BALSAMUM SALICYLICO-BENZOINATUM.

THIS balsam, called Penzöl balsam in Germany, is a cheap and good substitute for Peruvian balsam, and is used in veterinary practice. Slight wounds and excoriations smeared with it generally heal in a few days. It is thus prepared:—

	Parts
Bruised Siam benzoin	100
Pitch	15
Salicylic acid	10
Gurjun balsam	40
Absolute alcohol	500

Digest for some hours, with frequent agitation; allow the sediment to deposit; strain and filter. Then distill by the heat of the water-bath till part of the spirit is driven off, and reduce the cold residue to the consistency of thin syrup by adding alcohol.—*Pharmaceutische Centralhalle*, 1879, p. 408.

CINCHONA IN CALIFORNIA.

PROFESSOR HILGARD, in the *California Horticulturist*, gives some particulars of the experiments now being made to introduce the cinchona-tree into California. Five packages of fresh cinchona seeds were received from India some months ago by the director of the Economic Garden of the University of California. These seeds represented five different species of cinchona, viz., *C. succirubra*, *C. calisaya*, *C. officinalis*, *C. condamina*, and *C. hybrida*. Professor E. W. Hilgard writes in the *California Horticulturist* that the calisaya germinated most readily. At present there are growing in the propagating house of the Agricultural Department of the University several hundred healthy plants of each of the five species. So soon as the trees are sufficiently advanced they will be distributed to the various sections of the State of California, where the climate gives promise of success, there to be tried by careful and competent persons. The accounts received from India and Australia of the success of the cinchona in those countries encourage the belief that some of the five species will prove hardy both as regards cold and drought in the coast region south of San Francisco, and in the more sheltered portions of the bay region. There the summer fogs and the uniformity of temperature seem to present the main conditions known to be requisite for the growth of the cinchona, which appears to be a tree of considerable adaptability.

THE JIVAROS OF THE PINTUE, natives of part of South America, between Santiago and the Marañon, have the habit of vomiting every morning by the aid of a feather, arguing that all food remaining in the stomach through the night is unwholesome and undigested, and should therefore be rejected.

PRICES FOR 1879.
MINERAL WATERS.

7½ PER CENT. FOR CASH.

5 PER CENT. ON QUARTERLY ACCOUNTS.

E. GALLAIS & CO.,
 27 MARGARET ST., REGENT ST.,
 LONDON.

A GOOD MARKET FOR COD LIVER OIL } See page 5.

MEALS LONDON 1873 MUMFORD'S PARIS 1875
PURE CRUSHED LINSEED

20s., net, per cwt., Bag included; or 21s. in 1-cwt. Cask; in 14-lb. and 28-lb., 22s. per cwt., delivered in London. BEST QUALITY; NO OIL EXTRACTED. Carefully cleaned and ground (so as to retain the natural colour of the Seed without being heated.)

NEWCASTLE GRANARY & STEAM MILLS, FARRINGDON ROAD, LONDON, E.C.

CHEAP AND GOOD COD LIVER OIL } See Page 5.

STEDMAN'S TEETHING POWDERS.

1/1½ size (containing 9 powders)..... 8/6 per doz. } less usual
 2/9 " " 27 " 24/- " } discount.
 11/- " " 216 " 11/- net.

A mixed parcel to value 78/- net, at 6/6, 18/-, & 120/- per doz.

Terms Cash with Order.

Manufactory—78 EAST ROAD, HOXTON.

AIDS TO EXAMINATIONS.

MR. HENRY JUDD, of the West Central School of Pharmacy, is publishing a Series of Special Aids for Preliminary and Minor, particulars of which will be sent upon application.

29 GREAT CORAM STREET, LONDON, W.C.

MACKENZIE'S COMPOUND COD LIVER OIL EMULSION

Renders Cod Liver Oil agreeable for Invalids and Children.

Recommended extensively by leading Physicians and Surgeons

PREPARED ONLY BY

MACKENZIE & CO., Chemists, EDINBURGH

Sold in Bottles 2s., 3s. 6d., and 6s. each.

London Wholesale Agents—EDWARDS & SON, BARCLAY & SON, and SANGER & SON.

POST FREE
 WHOLESALE PRICE LIST OF
HOMŒOPATHIC MEDICINES.
 Mother Tinctures, Pilules, Globules, Sugar of Milk, Medicine Chests, Bottles, Cardboard Goods, and all Sundries connected with the Homœopathic Business.
W. Butcher & Co.
 WHOLESALE & EXPORT HOMŒOPATHIC CHEMISTS
 BLACKHEATH, LONDON, S.E.

SCHWAPPES
 Soda Water, Lemonade, Malvern-Seltzer, Potass Water, Ginger Ale.
PARIS PRIZE 1878
 These Waters have always had the patronage of Royalty & continue to be supplied to the QUEEN.
 Every bottle of the genuine is protected by labels bearing the "Fountain" Trade Mark.
MINERAL WATERS
 RETAIL OF ALL CHEMISTS WINE MERCHANTS & GROCERS

THE "PERFECTED" COD LIVER OIL. See page 11.

EXTRACT OF MALT. See page 11.

IMPROVED JUJUBES (PATENT). See page 11.

HOMŒOPATHIC MEDICINES.

E. GOULD & SON,

Chemists by Appointment to the London Homœopathic Hospital.

MANUFACTURING HOMŒOPATHIC CHEMISTS,

Are desirous of appointing Agents for the Sale of their Preparations in various parts of the United Kingdom and the Colonies.

For Particulars apply at 59 Moorgate Street, E.C.

MAY & BAKER. { SPECIAL NOTICE page 2.

EDITORIAL NOTES.

THE PHARMACEUTICAL COUNCIL AND THE SALE OF POISONS.

AN Irish orator is said to have once declared that there were always three ways of fulfilling a duty; it might be done thoroughly, it might be done imperfectly, or it might be neglected altogether. The Pharmaceutical Society was entrusted nearly twelve years ago with the duty of checking the reckless sale of poisons in Great Britain. The manner in which the successive Councils of that society have discharged this duty very nearly entitles them to a position in the third section of our Hibernian friend's classification. We should be glad to know if, in the course of those twelve years, the Society has prosecuted in twenty instances? Suppose they have done this, and suppose that in another twenty instances fines have been paid without a trial, is there in such figures any reasonable proportion between them and the number of infringements of the Act which have occurred during those years? The Act has been infringed, we do not hesitate to say, thousands of times a year. The Council may

CARRIAGE PAID ON 12 DOZEN AND UPWARDS.

think it a part of their duty to search for such infringements, but it is at least open to question whether they have been sufficiently vigorous in their action in regard to those which have been brought under their notice. It is certain that within the past twelve months the Trade Association, and only the 17th section of the Act to work with, have done more publicity to the poisons' regulations than the Pharmaceutical Society had done in the previous ten years. The correspondence which appeared in the daily papers a few weeks ago respecting the abuse of narcotics directed attention rather prominently to the facilities for obtaining poisons, and though several of the correspondents cited somewhat unfortunate instances, we cannot think that the criticism of the Pharmaceutical Society was altogether reserved. A coroner and a journalist between them held the strange idea that because an offender had paid the penalty for illegally selling poisons rather than go to law, it was possible to "square" with the Society. Of course every misdemeanour can be "squared" in that manner. The gentleman who pathetically described how he had been able to get a prescription containing morphia prepared by several druggists, though the medicine was rapidly ruining his health, made out a very good case for his own subjection to the taint, but hardly proved the necessity for a prosecution of pharmacists *en masse*. What was clearly proved, however, by the correspondence was that there is a public demand for a rigorous application of the Pharmacy Act in quarters where it is not obeyed, and it can hardly be supposed that the existing illogical exemption of poisonous patent medicines from the sale of poisons clauses would stand for an hour if attacked in earnest. We observe that the Pharmaceutical Council has gone into committee on this subject of narcotic poisoning, and we hope that whether they bring forth any new scheme or not the result of the recent agitation will be to infuse more vigour into their administration of the law as it stands, in the interests both of the public and of the public.

DISPENSING PRICES.

FRANCIS R. HULLAH, writing on February 6 to the *Times*, states that a chemist in Bond Street charged him 3s. for preparing a prescription containing 16 grains of chloral hydrate in 1 oz. of water with a little ginger to flavour it. A few days later the same prescription was made up at the "shops" where Mr. Hullah usually deals, for 8d. If these prices are correctly stated, which we do not doubt, we cannot but sympathise to a great extent with Mr. Hullah. We do not think the public will expect chemists to compete with co-operative stores. Customers who wish their medicines to be dispensed on the same commercial system as that which they buy their coals must take their chances at the shops. But these would not be many. Every chemist knows that, as a rule, the public are disposed to trustfulness. It is too true that certain West-end chemists in their desire to be rich have taken advantage of this trustfulness, and have based their charges not at all on cost, but on an estimate of their client's resources. We have no hesitation in saying that the price named as having been charged for medicine in question will astonish chemists generally; yet it is very unfortunate, but very certain, that the trade generally has to suffer for the unfair rapacity of a very small section. Two days later "Æquitas" wrote as follows in the *Times*: "For the lower price of the stores your correspondent complains of the chemist's price can only obtain medicine, however pressing the emergency, during 44 hours of the week, while at the chemist's he can be served any

hour, day and night. Surely the difference of cost is but proportional to the difference of security arising from medicines being obtainable at the chemist's at any time—a consideration most material when health, perhaps life, are at stake."

FAILURES IN 1879.

LAST month Mr. Richard Seyd, F.S.S., published his usual analysis of the failures of the past year in the United Kingdom, which provide some slight ground for satisfaction. The total number of failures in the year was 16,637. In 1878 the total was 15,059, and in 1877 11,022. This, as it stands, does not seem very hopeful; but the monthly analysis presents an almost regular record of improvement, the reason of which is not very easy to get at, because even if the revival of trade, which seemed to begin about September, were as genuine as its best friends could hope for, its effects on insolvents could hardly be expected to exhibit themselves yet. Mr. Seyd gives the following figures for the months respectively:—January, 1,618; February, 1,596; March, 1,562; April, 1,546; May, 1,494; June, 1,174; July, 1,393; August, 1,252; September, 1,173; October, 1,354; November, 1,264; December, 1,211. So that it appears that there were 8,990 failures in the first six months of 1879, against 7,647 in the latter half of the year. These figures include wholesale, as well as retail firms, and professional men. Taking the wholesale trades, the difference in the two half-years is still more striking. There were 970 failures up to June 30, and only 614 from then to the end of the year. The following extracts from Mr. Seyd's compilation will present some features of interest:—

	Failures in 1877	Failures in 1878	Failures in Six Months ending, 1879,		
			June	Dec.	Total
Wholesale chemists, druggists, &c.	20	41	13	17	30
Aerated water, ginger beer, &c., makers	8	43	16	31	47
Chemists and druggists	76	96	46	50	96
Surgeons, physicians, and dentists	62	70	50	42	92

THE REGISTRAR-GENERAL.

THE appointment of Sir Brydges Henniker to the position of Registrar-General has been resented with great unanimity by the medical profession as a most unwise, as well as ungenerous, slight on Dr. William Farr, whose 40 years of service as the head of the Statistical Department constituted a claim which most persons will think superior to Sir Brydges Henniker's relationship to Lord John Manners. It is curious how persistently all Governments perpetrate these miserable "jobs." Nothing destroys their prestige more rapidly or more certainly, and yet they cannot help indulging in them. The matter of Dr. Farr will doubtless be heard of several times in Parliament. Mr. Anderson, on the 6th inst., asked a question on the subject of Mr. Slater Booth, who said in reply, that Dr. Farr's state of health was alone sufficient to make it inexpedient to appoint him to the office of Registrar-General. Mr. Anderson was not satisfied with the answer, and announced that he would call further attention to the subject. In acknowledging copies of the resolutions recently passed at a meeting of the South London District Metropolitan Counties Branch of the British Medical Association, the Premier, through his private secretary, states that he is "highly sensible of the eminent services rendered by Dr. Farr during his past career, that he well knows how to appreciate them, and that Her Majesty's

Government had excellent reasons for the course which they considered it their duty to take." The "excellent reasons" we fear are only too obvious.

PROFESSORS AT HOME.

ON January 28 a case came before the Court of Exchequer which lifts for a moment the veil hiding from ordinary gaze the inner life of one of our nests of learning. Robert Galloway, late professor of chemistry in the Royal College of Science at Dublin, brought an action against W. F. Barrett, then and still professor of philosophy in the same institution, for libel; damages were laid at 10,000*l.* Evidently philosophy must be a good business if Mr. Barrett can afford to libel his colleagues at such a rate. We should not like to have to trace the squabble to its commencement. It is very probable that the learned professors had not for some time past occupied themselves exclusively with the tranquillising studies of chemistry and philosophy respectively. At last some complaints of Mr. Galloway's, about a porter apparently, were put before the governing body, and Professors Hull and Barrett were appointed to investigate. A report was drawn up, and to that Mr. Barrett added a tag, which constituted the alleged slander. According to Professor Galloway this tag said in effect that he (the plaintiff) had made serious charges against this porter, and then had not come forward to substantiate them. Subsequently, whether consequently or not we do not know, Mr. Galloway had been dismissed from his professorship. Mr. Barrett's defence was that the alleged slander was privileged, and that it did not bear the construction which had been placed upon it. A long technical argument followed as to the privilege, at the end of which the Lord Chief Baron was about to give judgment against the plaintiff, when, on the request of counsel for the latter, an opportunity was given to join issue in fact. The case is therefore yet undecided.

PRICES OF DRUGS IN BRISTOL.

THE well-known firm of Ferris, Boorne, Townseud & Boucher, of Bristol, after a successful career of more than a hundred years, have announced within the past fortnight, suddenly, and without any previous conference with, or notice to, their fellow-chemists of that city, a "new system of retail trading, based upon the principles adopted by the various London and provincial co-operative associations." They are stating their intentions in column advertisements in all the Bristol journals, and they have posted 24,000 copies of their new price-list to Bristol families. According to a copy of their price-list, they accentuate the temptations to the public to which we have now become accustomed. Castor oil, 10*d.* per lb.; Epsom salts, 2*d.* per lb., or 7 lbs. for 9*d.*; glycerine, 1*s.* per lb.; pills, 6 dozen for 1*s.*; adhesive plaster, 6*d.* per yard; patents at 9*d.* for most 13½*d.* articles; arc specimens of the new departure.

We are not now discussing whether the principle adopted by these gentlemen is a wise one or not. Certainly its success must mean an equivalent injury to the other druggists of Bristol and the neighbourhood. The time seems to have passed, however, for sentimental considerations of that kind. But the trade can hardly fail to contrast the method in which Messrs. Ferris have seen fit to act with the courtesy displayed towards his fellow-chemists by the *doyen* of Liverpool pharmacy, when he judged it desirable to modify his tariff in one section of his business. We gave details of that affair last month.

The Bristol chemists have always had the reputation of exceptional intelligence, and we expect that they will meet

the competition forced on them with courage and ability. They may be sure that the public cannot do without chemists, nor can a city like Bristol conveniently do without one pharmacy. Messrs. Ferris & Co. will not monopolise trade there, and if unfair profits are abandoned, pharmacy, we believe, will continue to be a business moderately remunerative for the expenditure of personal attention, but it will never be a suitable business for the mere investment of capital, which is what it would have to be if Messrs. Ferris's system of trading were founded on correct economic principles.

ANALYSM.

"At the fortnightly meeting of the West Ham Local Board, held at the Town Hall, Stratford, on January 30, Mr. G. Rivett in the chair:—

"Dr. Tidy, the public analyst for the county of Essex, attended the Board to meet a complaint made of delinquency in returning samples of milk and butter forwarded to him for analysis, and stated that he had not been aware of the case in the Act which limited the time to 28 days within which summonses must be taken out."

Ignorance of the law is no sound defence, even for a layman; what must be said when the servants of the law bring forward this plea?

ARSENICAL PAPER - HANGINGS A NEW CHANCE FOR THE PHARMACY ACT.

MR. HENRY CARR, C.E., has set himself the task of bringing up the trade in arsenical paper-hangings. We have previously noticed a pamphlet by this gentleman on the subject,* and last month a paper written by him was read before the Society of Arts on "Our Domestic Poisons," in which arsenical paper-hangings were the chief subject of complaint. The Society's lecture-theatre was hung round with specimens of paper-hangings, arsenical and non-arsenical, and these were so arranged as to prove that in most cases the tint obtained from a poisonous paper might as well be had from an innocent one. Mr. Carr states that arsenic is used quite unnecessarily in red, brown, blue, pink, fawn, grey, black, and other papers; that greens can be obtained without it, though in the opinion of some the arsenical greens are a shade more brilliant than can be got without poison; that it is said to give permanence, body, and brilliancy to aniline colours; and that in low-class papers, and especially for export, its price being fractionally cheaper makes a consideration. The evidence of injury resulting from arsenical paper-hangings was very large, and on this point Mr. Carr was supported in the discussion which followed his paper by Mr. Jabez Hogg, Dr. Thudicum, Dr. A. S. Taylor, Dr. Lauder Brunton, and others. Discussion, in the strict sense of the term, however, there was none, for, in accordance with the system adopted by the Society of Arts, the supporters of the author of the paper surrounded the platform and monopolised the talk, to the exclusion, as was protested, of some manufacturers who tried to get a hearing, and to whom the meeting would gladly have listened.

The general purpose of the author and his friends is to bring an Act of Parliament to prevent the introduction of arsenic into the manufacture of wall-papers and other articles known to purchasers. It appears to us, and we submit the suggestion to Mr. Carr and to the Committee of the Medical Society which is preparing a Bill on the subject, that any

* "Our Domestic Poisons." See CHEMIST AND DRUGGIST, March 31st, page 114.

ne Act of Parliament would be quite superfluous. There appears to be no reason whatever why the provisions of the Pharmacy Act in reference to the sale of poisons should not be levelled against the retail sale of arsenical paper-hangings, if such a course is advisable. It would be difficult to deny that these are preparations of arsenic, and as such they would be included under Part I. of the poison schedule. Any person selling them unless duly labelled, and signed for by the purchaser, according to the required formalities, is liable to a penalty of 5*l.*, which might be sued for by any one. The Pharmaceutical Society, too, could prosecute any one not being a registered chemist and druggist who might sell them under any conditions. We imagine that a few prosecutions would soon have the desired effect. Mr. Simon, who presided at the meeting referred to, would be very well able to give an opinion as to the sufficiency or otherwise of the case we have proposed.

PETROLEUM IN GERMANY.

It is reported that oil has been "struck" in Germany, in the neighbourhood of the city of Hanover. The oil is found in the suburbs of Linden and Linmer, as far as the Hildesheim Hills to the south and the villages of Oilper Klein Scheppentst to the east. The whole area comprises about 40 square miles, the centres being at Oberg and Oilsburgh, and the districts due north and south of these two principal places. Mr Strippelman, a well-known mining engineer, gives it as his deliberate opinion that things in Hanover have reached a point exactly similar to what was the situation in America immediately anterior to the discovery of the Pennsylvania wells. A like view is taken in a report by Herr von Ducken, a Hanover mining Councillor and Government engineer, who has just inspected the Oedessen Works. As might have been expected, steps are being taken for forming a Petroleum Mining Company, to work the newly-discovered riches of Hanover. The Pennsylvania rope-boring apparatus now employed is capable of piercing from 30 to 40 feet per day, whereas with the old machinery hitherto in use no more than 2 or 3 feet could be perforated. The present yield of the Hanoverian wells is at the rate of 10,000 cwt. per annum. Consumers, therefore, may be congratulated upon this valuable addition to the available supplies of so cheap and useful an illuminator as petroleum oil.

ADULTERATION IN AMERICA.

THE success of analyses in England has naturally enough tempted American professors to do their best to whip the people of the United States into the state of panic respecting adulterations such as this country enjoys at or about the recurrence of every maximum sun-spot period. The extravagant statements which have been published are indicated in a paper read by Professor A. R. Leeds before the New York Academy of Science, pointing out what adulterations are not current. No trace, he tells us, of strychnine, cocculus indicus, or other poisons is to be found in beer. Vinegar does not contain sulphuric, nitric, or hydrochloric acid. Pickled cucumbers of the brightest green contain no copper. Very few samples of bread contain alum; cream of tartar is sometimes adulterated with 30 per cent. of terra alba; dyed goods are free from hurtful compounds. The sensational statements, iniquitous though they are, have in America, as in England, stirred up the sluggard, popular opinion, to take measures to protect the public from its own ignorance and the cupidity of its servants. Many months ago Dr. Squibb's fertile pen elaborated a scheme for thoroughly exterminating adulterators and adulterated goods. A more taking trap for public attention has been

provided by Mr. F. B. Thurber, of New York, who has placed \$1,000 at the disposal of the National Board of Trade to be expended in premiums for the best act or acts, accompanied by an essay, designed to prevent injurious adulteration and regulate the sale of food without imposing unnecessary burdens upon commerce. The Board has unanimously resolved that the president be authorised to appoint a committee of experts, to be composed of five members—one of whom shall be a member of the medical profession, one a chemist, one a member of the legal profession, and one a merchant; said committee to examine the acts or essays which may be submitted to them, and to award prizes therefor.

THE BORDEAUX LEECH TRADE.

AN official account of the Bordeaux leech farms, by M. Sapin, member of the Limoges Society for the Protection of Animals, published in the *Courrier du Centre* of the Haute-Vienne for last April, is made the text for an essay on cruelty to horses by "Ouida" in the *Whitchall Review* of January 17:—

Certain speculators, we learn, "have made artificial swamps on the banks of the Garonne, and filled the swamps with leeches. To be profitable these leeches must multiply themselves by millions; to do this they must be liberally supplied with food; to thus supply them the Bordelais speculators buy up all the old and worn-out horses of the province, and drive or drag these horses into the swamps, which are subdivided by wooden compartments, so placed that when these unhappy animals have been forced into the mud there is no escape for them. The leeches fasten on them instantly by thousands; the horse is in a few moments black with crawling creatures; the bloodsuckers fix themselves most of all on the open wounds and galls that these poor horses have incurred in their many years of service."

The frantic terror of the poor horses is described as, bleeding from all their most sensitive parts, they try vainly to shake off the leeches, but are at last sucked down into the noxious slime and seen no more. Nearly 20,000 horses—aged, infirm, weak from overwork, hunger, and fatigue—are said to be sacrificed annually in this way at Bordeaux. "Ouida" judges the agonies of the horses will not be a sufficient reason to check the barbarities of greedy speculators, but she hopes that an argument which may be heard is that leeches nourished on agonising and often diseased horses are very likely to convey ulcers, inflammations, and scrofulous maladies into the human system, and she states on the authority of doctors of eminence that such diseases do frequently follow the application of leeches.

THE METRIC SYSTEM.

THE natural human mind revolts against the metric or rather against the decimal system. There is no getting over the fact that halves and quarters find their way easily to the uncultivated intellect, while the decimal point is only understood after a course of arithmetical training. In France, the home of the system, they sell cheese, butter, meat, fruit, and all such goods by the "half-kilo.," which is practically the standard weight in the retail trade. In America they speak of 12½*c.*, and would never dream of writing \$125 to represent that amount. In all decimal systems the divisions invariably run in the old-fashioned grooves—halves, quarters, eighths, and so forth; and, as we have instanced, familiarity with the metric system does not diminish that tendency.

If we track this characteristic to its origin we come to the

conclusion that it is our decimal system of figures itself which is an error. It is hardly possible to conceive how immeasurably simplified calculations would have been if an octal instead of a decimal system had been provided for us by the wisdom of our ancestors. That an octal system did once prevail is exceedingly probable. The Hindoo system of numerals, which we now employ, is declared by themselves to have been provided for them by divinity; but in Europe its general adoption can hardly be traced back further than about the date of the invention of printing. Up to the early part of the 16th century London merchants kept their accounts in Roman numerals. No doubt the Roman system was a decimal one; but it may be remarked that even in this the effect of halving is most probably visible in the use of the sign V to represent the half of X. The Greek and the Hebrew systems of enumeration, as we know them, may also be described as decimal, though there is clear proof that these had been modified from an earlier form by the introduction of extra letters to represent extra figures. It is not impossible that this may have been a change from an octal to a decimal system, and the theory is strengthened by the curious respect which has always been paid to the number 7 as the ultimate figure among Semitic nations. Leibnitz mentions a very remarkable diagram, which he says was communicated to him by a Jesuit of Pekin, and which is said to be a copy of a Chinese symbol called the Cova, or "lineation," which is said to be suspended in their temples, and is attributed to Fo-hi, the founder of the empire. This symbol represents a system of binary arithmetic from 1 to 7, and Leibnitz adds that there is a larger Cova which follows out the system up to 63. If true, this would be almost perfect proof of the existence of an octal system of figures, as 63 would in such a system correspond with the 99 of the decimal method.

As our figures, however, are decimal, and it is too late to think about reforming them, it must be clear that a system of weights and measures corresponding to our figures offers the greatest facilities for calculations. This fact has been conclusively proved by the universal adoption of the metric system in all scientific work. In America an influential section of medical men are advocating the exclusive use of the system in prescriptions and in all medical literature. In view of this movement, and to aid it, the *Druggists' Circular* very sensibly urges weight-makers to prepare sets of accurate metric weights, for trade purposes, to be sold at a moderate price. It is desirable that these should comprise not merely the minute weights for scientific purposes, but also the larger sizes, up to a kilogramme. It is greatly to be regretted that our intelligent legislation of the past few years precludes the possibility of any such experiment here. The Weights and Measures Act, as we have before pointed out, provides by section 21 that any contract or dealing expressed in weights or measures of the metric system shall be legal, but that Act provides no means of testing metric weights and measures for trade purposes, and section 29 threatens with severe penalties any person who shall have an untested weight or measure in his possession. If the metric system is to make any progress in this country it is essential that the necessary tools should be available; and it is consequently highly important that some addition should be made to the Act, which should legalise the use of such weights and measures, as well as the expression of them.

KILLED BY AN ELECTRIC SHOCK.—At a theatre at Aston, on January 20, one of the orchestra, incautiously seizing two brass connections used in the production of the electric light, received a shock which made him insensible, and forty minutes later he died from its effects.



AND

Literary Notes.

THE DOCTORS OF THE DARK AGES.*

THE first claim made on our attention by the School of Salerno is as the refuge of medical science and practice during the dark times when modern Europe had not yet emerged from the ruins of the Roman Empire. This claim touches pharmacists at many points. One of the earliest attempts to ensure by examination the qualifications of physicians, and perhaps the first condemnation of private arrangements between drug-sellers and prescribers, were made at Salerno.

But beside all this, Robert, the son of William the Conqueror, was wounded in the Crusades, and in A.D. 1101 he stopped here on his homeward journey to secure the care of the most skilful of physicians. The best and most important work produced by the school, the "*Regimen sanitati seu de conservanda valetudine liber*," of which we know 207 editions and translations, commences with this verse:—

Anglorum regi scripsit tota schola Salerni,

rendering it at least probable that Robert instigated its composition. This book consists of 864 verses, and traverses much of the ground occupied in later days by "*Home's Physicke Bookes*," and now by "*Family Physicians*." We will quote four verses only, and leave it for the present:—

Triste eor, ira frequens, mens raro gaudia volens,
 Hec tria consumunt corpora fine brevi.
 Si medici desint, medicamina sint tibi illa
 Hec tria: mens laeta, requies, moderata diata.

THE DIPLOMA AT SALERNO.

Laws are still extant passed for regulating the practice of medicine by Frederic II, King of Naples and the Sicilie (1198-1250 A.D.). No man might profess the healing art till he had studied seven years at (Salerno or at Naples), nor was he admitted to the study of medicine till three years had been devoted to logic. At the close of this long probation the ten professors of the school gathered in the grand cathedral, whose crypt held the relics of St. Matthew the Evangelist. The candidate, at least 21 years of age, was called on to explain some passage in Galen, in Avicenna, or the aphorisms of Hippocrates. He swore never to speak against his alma mater, never to teach falsely, never to take fees from the poor; to administer the Sacraments to his sinking patients, to make no dishonest bargain with druggists, to administer no abortive drug to pregnant women, nor poison to any human being. If it came to his knowledge that any confection was fraudulently prepared he would denounce it to the court. He agreed to visit his patients twice each day, and, if requested, again at night. For each day's visits in the camp or city he must demand no more than half a gold tarennum. Beyond the city walls he might receive four tarrenni or three tarrenni and his expenses. Satisfaction given on all these points, a half-opened book was handed to him with a diploma licensing him to practise medicine for reward "*per universalis terrarum orbem*"; the Prior, the eldest of the professors placed a golden ring on his finger, a crown of laurel on his head, embraced him with a kiss, and gave him a paternal benediction.

HISTORICAL MATERIALS.

We have singularly complete accounts of the social relations of the physicians of that age. Three independent relations have come down to us. In 1837 Professor Henschel discovered in the library of the College of Medicine at Breslau a fine MS., entitled "*Compendium*

Lindenbrogius—*Codex legum antiquorum*, lib. iii. cap. 34.

* *L'École de Salerne et les Médecins du Moyen-âge d'après le professeur Von Zimmern*. Par le Dr. Alphonse Moeller. Louvain: Ch. Peeters, 1878, pp. 26. (Extrait de la *Revue Catholique de Louvain*.) At the end of the pamphlet we read "*Extrait du Deutsches Archiv für Klin. Medicin.*"

Salitanum," which contains 34 works, including most of those previously known, together with some new ones. The illuminated initial letters fix the date and locality of the MS. in Italy in the twelfth century, and display the costumes of the professors and their pupils. One of the new treatises is entitled "De Adventu Medici ad Egrotum." Such an official document would naturally, like the medical journals of today, advocate the highest ideal standard of professional ethics and morality. It shows us a flattering portrait.

Petrarch (1304-1374 A.D.), a poet, the successor of Dante, seriously studied the art of medicine in his youth. He lived much in the courts of kings and popes, and mingled in the busy crowds of the Italian cities. Towards the close of his life he published four works, naively entitled "Contra medicum quemdam invective." Here we may expect to view the blackest side of the metropolitan medical profession: to see their defects and vices magnified, their virtues depreciated or ignored.

At the beginning of the tenth century, Rhazes, for many years a physician to an Eastern Caliph, wrote an essay on "The circumstances of the art of healing, which tend to withdraw general confidence from the best physicians and transfer it to their inferiors." A Hebrew translation of this work was discovered in the royal library at Munich, by Steinschneider who made it the subject of an article in Virchow's "Archiv für Path. Anatomie" (1866). The picture it gives will be darkly coloured, though the point of view is very different from Petrarch's.

THE ETHICS OF SALERNO.

The first of these sketches shows us the physician questioning the messenger who calls him to his patient, so that he can at once tell the sick man what part is affected, and how the disease commenced; he insinuates his appreciation of the elegance of the dwelling and the amiability of its inhabitants. He feels the pulse and examines the urine long and carefully, tells the patient that with God's help he will cure him, but informs the parents as he leaves that it is a serious case. Thus the recovery of the patient increases his credit, and the death will seem to have been foreseen from the first. The physician readily accepts an invitation to dinner, but while at table he frequently inquires how the patient fares; he wishes not to know this, but to impress on his mind his unremitting attention to his charge. He seizes a moment when improving health has brought good spirits to press gently for his fee, and neglects not to talk of his skill and cures at favourable moments when the patient is surrounded by his friends.

PETRARCH.

Petrarch paints the doctor in purple robes and golden chains. He knows neither rhetoric nor logic, but deafens the patient with syllogisms and arguments; when his colleagues are present he gets heated and abuses them. After a prolonged discussion he decides that barley-water is not good for fevered patients, for the water is a substance and not a fever is an accident! He commands his patient, on pain of his life, to neither eat, nor cough, nor spit, without permission; yet invite him to your table, and he'll

Compound for sins he is inclined to,
By damning those he has no mind to,

and wishes to his taste will be praised for their virtues, and others will be condemned. His conversation has given rise to the proverb, "Mentiris ut medicus," "you fib like a physician." He is proud as the hero of an ancient triumph; the truth he is not to blame that he is not qualified for this honour by the 50,000 victims, though in olden days these could be enemies, and his are fellow-citizens hidden by the friendly grave. No emperor, no sultan, can claim like the physician, that even his mistakes are profitable.

RHAZES.

Rhazes, as the physician and councillor of princes, and rector of the great hospital at Bagdad, rightly considered himself one of the first physicians of the day. His work shows us how some doctors pandered to the prejudices of the people, and the loss of repute suffered by conscientious men who disdained to stoop to this level. Immediately the physician has felt the pulse and seen the urine he is ex-

pected to know all that the patient has eaten or done, without asking a single question. By adroit and indirect questions certain doctors gain enough information to deceive the vulgar. Others even have men and women in their pay who question their patients waiting round the door, and reveal what they can learn to the servants; or they consult him for pretended diseases, and wonder greatly at the doctor's skill when he detects all their fictitious ailments in their urine; or, entering with the patients, they let the doctor know all he wants by signs and judicious remarks.

"When I began to practise," says Rhazes, "I determined to ask no questions when once I had seen the urine. Later, when I questioned the patient with care, my reputation rapidly decreased; I was told, 'We thought that you would know all that is in us as soon as you saw our urine.' It was in vain that I answered that such was not medicine, but quackery."

Dr Moeller's pamphlet, which has furnished most of the outlines of this very brief sketch, will serve as an excellent supplement.

It must be remembered that the Moslem Empire in the tenth century, and Italy in after times, were the seats of a vigorous and abounding civilisation, compared with which the rest of Europe was more degraded than are now the darkest parts of Russia. The schools were in far-distant lands, and we are not surprised to find princes and archbishops among the graduates at Salerno, and the chief citizens considering a connection with the university their highest obtainable honour. There is less difference between a pharmacy in Oxford Street, and a "store" in the backwoods, where Indians offer pelts for seidlitz powders, than between the physicians of Salerno and the wandering empirics and old wives who everywhere pretended to aid nature in the cure of all diseases. The wonder is not that all was dark, but that there was any light.

[We have also received from Dr. Moeller the following works:—

Du Daltonisme au point de vue théorique et pratique. Bruxelles, 1879, 8vo, pp. 146. (At page 143 is a bibliography of the subject containing 42 entries.)

Notes Médicales sur la Suède et la Norvège. Bruxelles, 1879, 8vo, pp. 23. (Notes on points of medical interest in various towns of Norway and Sweden.)

Du Massage, son action physiologique, sa valeur thérapeutique, &c. Bruxelles, 1877, 8vo, pp. 27. (Contains a short historical account of this mode of treatment.)]

Cooley's Cyclopadia of Practical Receipts. Sixth edition. Revised and partly re-written by Richard V. Tuson, F.L.C., F.C.S. London: Churchill's.

THE sixth edition of Cooley's "Cyclopadia," the publication of which has been lately completed, demands more notice than new editions usually receive. A book which has for 40 years occupied the highest place in English literature as the standard work of reference for medical, pharmaceutical, and general formulæ deserves the most respectful treatment on that account alone; but on this occasion the publishers and editor have ignored their previous position, and have set to work to compete with their former efforts, with such results as to leave pursuit hopeless in the particular field of literature which this work occupies. The present edition contains 1,796 pages; its predecessor contained 1,200, and the second edition, which is the earliest we are able to refer to, 808 of a smaller size. It is obvious, therefore, that the plan of the work has been very extensively developed since it first came before the public. The last edition has been published in 16 half-crown parts, and forms two fine volumes.

It would be difficult to give an idea of the variety of information given in this work. On most subjects likely to turn up in the day's work, especially in the day's work of the pharmacist, some assistance is likely to be found in Cooley. It would be difficult to name any substance in a druggist's shop not treated of, with formulæ for it if it is a compound. Domestic information, from how to light a fire, and how to make mince pies, to other more important matters, are also included. Medical subjects are treated

with some fulness, more especially in this edition. Scientific compounds and inventions are fairly explained, though there is no attempt to write a manual of chemistry. A good deal of new matter of this kind appears in this edition. Legal information is given occasionally, but there seems to have been no systematic intention to include this. For instance, the Public Health Act is given in sections under various headings, and possibly the whole of it is contained somewhere within the two volumes, but mere mention of the Sale of Food and Drugs Act is all we can discover.

Formule from all sources have been collected, and of course these are of all characters, good, bad, and indifferent. On some subjects, however, some judicious remarks respecting the manufacture are added. The subjects are arranged alphabetically, and perhaps an index is hardly required. One was promised by the author in his earlier editions, but this promise has been omitted from later issues. Of course errors are to be found by searching. We have noticed, for instance, several names wrongly spelled. Mr. Kingzett is Italianised on page 752 into "Kingzetti." A book published by Mr. Stanford is several times quoted. Besides giving the title variously the unfortunate publisher himself is very badly treated. On page 1490 he appears as "Stamford," on page 1581 as "Glanford," on page 1675 he turns up as "Sandford." On page 1588 "Pareira" and "Atfield" appear in company. Other misprints might be named, but we do not think they are numerous, or in any case important. A curious error occurs on page 1415, where is given Sydney Smith's well-known poetical recipe for salad dressing. The editor adds to this in a foot-note—"The poet has inadvertently ignored the oil and vinegar." It happens, however, that the omission is that of the editor, not of the poet: at least in other old books where the rhyme occurs we find the lines:—

Four times the spoon with oil of Lucca crown,
And twice with vinegar procured from town.

We had marked also a few passages where it would have been better to have corrected the information by later materials, but it is hardly worth while to indulge in such minute criticism. Our general opinion of the book is that it is a most valuable store of information, especially suited for the chemist and druggist.

A Note-book of Solubilities. Arranged chiefly for the Use of Prescribers and Dispensers. By John Eagle, M.P.S. London: H. K. Lewis. 2s. 6d.

It was with a feeling of satisfaction that we opened this little treatise, having frequently recognised the want which it is intended to supply. Such a treatise, however, to be of use to "medical men and pharmacutists" must be both practical and correct, practical in so far as the conclusions arrived at are drawn from observation on substances as met with commercially and not as found in the laboratory, and correct in so far as they are the result of careful personal experiment. We do not know whether it is a want of attention to this very proper rule or whether the author has simply accepted the conclusions of other investigators, irrespective of other considerations, such as temperature, &c., but we confess to a strong feeling of disappointment on finding that the results tabulated did not in many cases square with our own observations. We have suggested temperature because we frequently find investigators noting their experiments at different temperatures, and the author has apparently accepted their conclusions with the most loose regard to correctness or harmony of detail. We find, for example, on one page alone:—

1 in 778 water at 60° Fahr.
1 in 6 water.
1 in 3 cold water.

One part slowly dissolves in 50 parts of water at the ordinary temperature—60° Fahr.—we know, but what is meant by "water," "cold water" or the "ordinary temperature" we have no means of determining. No more do we know the meaning of rectified spirit in comparison with hot alcohol, "hot rectified spirit" and "cold rectified spirit" occurring on another page. These must be considered small details, however, when we look over the solubilities themselves. Taking a few of the better-known salts at random, we find sulphate

of magnesia, for example, is given as soluble in 1½ part of cold water. We thought the merest tyro would have known that water would take up at 60° Fahr. its own weight of this salt. Rochelle salts (soda tartarata) is given as soluble in 2½, but this is exactly one half in excess of water. Acetate of potass is given as soluble in 1, whereas we have frequently seen prescriptions ordering 2 parts of this salt to 1 of water, and no difficulty was found in dispensing such. Bromide of potass is given as soluble 1 in 2, but we find it soluble 1:6. Alum is given as soluble 1 in 18, but we find it difficultly in getting a solution 1 in 12. Borax, on the other hand, is given as 1 in 15, but we have never been able to get a solution of the crystal stronger than 1 in 20 to 2. Camphor is given as soluble 1 in 1½ part rectified spirit, and 2 in 1 of chloroform, but we find it soluble 1 in 1 of spirit and 3 in 1 of chloroform. Sulphate of bebecrine is given as 1 in 80, but this, we think, must be a misprint for 1 in 10.

Many other examples might be given, but we think we have sufficiently indicated the value of this "Note-book" to medical men and pharmacutists.

Medical Chemistry, including the Outlines of Organic and Physiological Chemistry; based in part upon "Rèche Manual (sic) de Chimie." By C. Gilbert Wheeler. Second and revised edition. Philadelphia: Lindsay, Blackiston; Chicago: S. J. Wheeler. 1879. 8vo, pp. 428; index (13 pp.).

"MEDICAL chemistry," says the author, "has not as yet secured in American colleges sufficiently-pronounced attention to create a demand for text-books of considerable size or extended scope," so he has compiled a text-book for students, which he doubtless considers just sufficiently complete, and hopes to see introduced into the American college by his friends the professors. The kindly feeling existing among teachers of science in America seems admirably intense, if we may judge from the frequent complimentary notices of the researches of Prof. —, of Detroit; Prof. — of Pittsburg; and other gentlemen equally well known on that side of the Atlantic. The vulgar saying, "Scratch me back and I'll scratch yours," seems to describe this feeling exactly.

The following is a remarkable but not unique specimen of the author's accuracy in matters bordering on pharmacology:—

Salt of sorrel is extracted from burdock (*Prunella*) in Switzerland. (!) . . . Page 112.

We do not think that either its style or matter will make this book a classic.

Nitro-glycerine in Pharmacy. By William Martindale Ph.C., F.C.S. London. 1880. [A reprint, pagged 35-36; no title-page.]

THE most interesting point in this pamphlet is the announcement of the discovery of the solubility of nitro-glycerine in oils and fats. While beating about for some convenient excipient for small doses of nitro-glycerine a drop of nitro-glycerine was let fall into some almond oil as an experiment it immediately dissolved. Cacao butter was tried with similar results, and, as this new property seemed likely to be serviceable in the preparation of explosives, provisional protection was secured, but the patent has not been completed. Only 15 parts can be dissolved in 100 parts of olive oil, and, while blows will not explode this solution, dynamite containing 75 per cent. of nitro-glycerine is much more portable; and Prof. Abel states that the practical objections to the use of liquid explosive agents led to the production of the solid preparations of nitro-glycerine which are now used.

As the ordinary dose of nitro-glycerine is a hundredth of a grain, its solution in cacao butter answers perfectly for medicinal purposes. This can be made into pills with sugar and varnished; but, as it is generally required to act instantly, it is found better to make it into lozenges with chocolate paste. These are palatable, portable, and stable and, indeed, have already been noticed in our pages.

THE publication of Bentley and Trimen's "Medicinal Plants" is now completed. It comprises in all 42 5s. parts, and over 300 plates. We shall notice the work more fully next month.

MESSRS. CASSELL & Co. have sent us Part I. of the "Family Physician," but a single brick of such an edifice does not enable us to judge of the architecture, and we shall, therefore, only say that it does not err in over-conciseness.

We have received the very useful Calendar of the Pharmaceutical Society, published at 17 Bloomsbury Square, to which we would advise all inquirers concerning the business of that society to refer.

The *Druggists' Circular*, of New York, and *New Remedies*, of the same city, have both reprinted the greater part of the "Treatise on Dispensing" which appeared in the last CHEMISTS' AND DRUGGISTS' Diary.

LETTS' POPULAR ATLAS.—A very remarkable work has been commenced by Messrs. Letts, Son & Co. (Limited) under the above well-chosen title. Three maps are contained in each monthly part, the part being sold for 7d. Twelve parts will give a very comprehensive atlas, though it appears that some supplementary parts will afterwards be published. The maps are 17 inches by 14 inches, excellently engraved on steel, distinctly but lightly coloured, and presenting several novel features, such as indications of telegraph lines, depths of ocean, &c. Prizes for students are also offered in connection with this publication.

THE CHEMISTS' AND DRUGGISTS' DIARY FOR 1880.—The reappearance of this handy appendage to the pharmacist's desk is always welcome even on this side the Atlantic, for although much of the matter in the text is of a nature which chiefly concerns British readers, there are also many things of more general interest. Among the latter we may mention the "Treatise on the Art of Dispensing," which this edition contains, and which nearly covers 13 pages. It alone is worth the cost of the Diary to subscribers. Another feature of interest is the map of London, on which is indicated the location of many of the dealers in drugs and other goods in which the trade is interested.—"New Remedies," January, 1880, p. 25.

Clippings and Pickings.

CHARGING FOR THE "KNOW-HOW."—A coloured servant of a medical man in the South (*Pacific Med. and Surg. Journal*) to whom a patient, who had an important surgical operation performed, complained that his master had made a very steep charge of \$25 for half an hour's work, when \$5 would have been sufficient, replied, "He only charge you five dollars for de operation, de oder twenty was for de know-how."—*Louisville Med. News*, January 3.

MEDICAL LEGISLATION.—In the House of Lords on the 6th inst., the Marquis of Ripon asked the Lord President of the Council whether he could state what were the intentions with reference to medical education. The Duke of Richmond replied that the Bill on the subject which passed through their lordships' House last Session was sent down to the other House, where it was referred to a Select Committee. The same Bill would be introduced in the House of Commons and referred to the same Committee, in the hope of legislation this Session.

ARTIFICIAL WINES: PROTECTION IN TRADE!—Among the curiosities of protection is certainly the petition of the Rio manufacturers of false wines—a petition endorsed by several Brazilian merchants of high standing and entirely unconnected with the trade—remonstrating against the reduction of the import duty on common wines, and founding that remonstrance on the plea of protection to native industry, which, it is boasted, already turns out 4,000 pipes a year of false wines manufactured wholly of native rum, sugar, and logwood, and guiltless of any foreign admixture of the juice of the grape under whose name it is palmed on the public.—*Anglo-Brazilian Times*.

BARK AND BITE.—Mr. Smelfungus writes to *Punch* to suggest that as quinine is the known specific for ague, and as sufferers in the cold fits of the shakes are Chilly uns *par excellence*, no doubt the Chilians owe their recovery from their cold fits to having taken the Peruvian bark, not, however, under its usual name of *Chinchona*—but *Ihuascar*.

ANOTHER DIAMOND-MAKER.—Addressing the Philosophical Society of Sheffield on February 3, on the subject of the manufacture of precious stones, Mr. A. H. Allen, borough analyst, said that Dr. R. S. Marsden, a native of Sheffield, had recently been trying experiments in connection with the production of crystallised substances, and had succeeded in obtaining the crystalline form of a body which Mr. Allen thought might possibly be diamond. This result was obtained by an entirely new process, and there was every probability that the body thus procured was crystallised carbon.

CURE FOR EPILEPSY.—Madame Bismarck, it appears, has discovered a cure for epilepsy. The following is translated literally from the *Berliner Bürger Zeitung*, and appears as the circular of the president of a medical society of that city:—"January 12, 1880.—Her Highness the Princess de Bismarck wishes to receive before the 18th of this month as many magpies as possible, with the object of reducing them to ashes in order to obtain a powder against epilepsy. I beg you, therefore, to kill in your district as many pies as possible, and to send them, carriage unpaid, to the chief forester at Friedrichs or to my address."—J. L. L.

WHO GETS MOST SUNSHINE?—An American journal not long since declared that the United States had as much right as Great Britain to boast that the sun never set on its empire. But the *Scientific American* replies that geography is inexorable, and national vainglory must bow to its decrees. The United States from end to end is in the dark four hours in twenty-four. The writer, however, brightens up when he reflects that the sun really does shine on the United States when he pretends to. Americans must submit to four hours of sunlessness a day; England is lucky to get four hours of sunshine.

ETHER AS A DETECTOR OF FAULTY DRAINAGE.—Under this heading a letter appeared in the *Times* of January 21 from Lieut.-Col. Lonsdale Hale, suggesting that ether at 4s. a pint should be poured down suspected drains, so that its characteristic vapour might reveal defective places by its escape into the outer air. On January 23 Mr. G. W. Wigner pointed out in the same journal that there would be great danger of exploding the ether vapour, that the ether would probably injure any red-lead joints in the drains, and that the density of its vapour would cause it to fall from the top of the ventilator into the atmosphere, and so delude the observer.

HOW DOCTORS THRIVE.—Excited and anxious patient: "Doctor, I do wish you'd tell me what's the matter with me; I'm clear out of sorts this morning, and I'm afraid I'm to be down sick. What's the matter with me?" Doctor (gravely): "Let me see your tongue." Patient thrusts it out. "What have you been eating?" Patient (reflectively): "Well, I was out late last night, had a bit of supper at midnight, oysters, raw and stewed, lobster salad, cold tongue, pressed chicken, curds and cream, coffee, some fruit cake, a little cheese, and a handful of hickory nuts." Doctor (doubtfully): "Let me see your tongue again." Looks at it thoughtfully, then in authoritative tones: "Ah, yes, I see; you've been eating something that doesn't agree with you." Grateful patient gives him \$1.—*Detroit Free Press*.

MEDICINE IN THE TRANSVAAL.—A physician who was induced to leave a comfortable practice in England for the richer prospects of the Transvaal has published some letters in the *Transvaal Argus* lamenting his rashness. Before finally settling he travelled through the country, with disgust and regret increasing at each stage. "Not a district," he says, "not a town, not a hamlet is there in the Transvaal which has not its self-diplomated doctor." He hardly knew whether he was most astounded at the consummate ignorance of these charlatans, at their extortionate charges, or at the enormous influence they possess over the minds of the Dutch residents of all classes. The missionaries are nearly all curers of bodies as well as of souls, but he considers a missionary all the more valuable for a little medical

and surgical knowledge. There is a law in the colony which provides for the punishment of charlatans, but it is seldom enforced. The whole medical field is not only occupied by quacks, but the rascals are popular and rich.

COD-LIVER OIL SUBSTITUTE.—Dr. T. A. Emmet has recommended in the *British Medical Journal* pork fat as a substitute for cod-liver oil. A thick portion of a rib piece, free from lean, is selected and allowed to soak in water for 36 hours before being boiled, the water being frequently changed to get rid of the salt. It should be boiled slowly and thoroughly cooked, and, while boiling, the water must be changed several times by pouring it off, and fresh water, nearly boiling, substituted. It is to be eaten cold, in the form of a sandwich made from stale bread, and both should be cut as thin as possible. It is very nutritious, but it should only be given in small quantities until a taste for it has been acquired. It is frequently retained when the stomach is so irritable that other things are rejected. For this condition of the stomach it may be rubbed up thoroughly in a porcelain mortar, and then given in minute quantities at a time. It is made more palatable by the addition of a little table salt, and this is well tolerated, while the salt used for preserving the meat produces disturbance even in a healthy stomach.

THE GOVERNMENT AND THE TELEPHONE.—It has been announced that the postal telegraph authorities do not intend to interfere in any way with private firms in the erection and use of telephonic lines, whether worked by magnetism or electricity, provided such wire-communication be not intended to form part of "telephonic exchanges."

CHLORAL.

(In Two Lights—the Blue and the True.)

CHLORAL! of blue-blood the bluest,
Alcohol's and Chlorine's daughter,
Youth and beauty that reneweth,
Night's long watebes making shorter.
Blithely raise a pæan choral
Round thy fount of blessings, Chloral!
Toss no more in vigils lengthy,
Sigh no more for daylight's peeping;
Sweet and soft falls thy nepenthe,
In its calm worn spirits steeping.
Truly "*Amor vincit omnia*,"
Chloral's love can cure *Insomnia!*

(P.T.O.)

Chloral! spawn of depths abysmal,
Spring of restlessness and raving,
Fancies sick and visions dismal—
Source of still insatiate craving.
When the once-blest light auroral
Breaks thy feverish spell, O Chloral,
Comes Reaction's Nemesis,
And the soul in Tophet sinking,
Woos again thy fatal kiss—
Woos, and ends in endless drinking,
Till to the unplumbed abysm
Sink thy victims, Chloralism!—*Punch*.

THE HIGHER MORALITY.—*Nature* quotes the following translation of a Chinese placard from the *Foochow Herald*:—"Strictly refrain from eating cow's milk! Men should not rob the beasts of their food. Moreover, of all beasts the cow is the most useful and meritorious. Men who do not discriminate between mankind and beasts are worse than senseless. Those who sell milk darken their consciences for gain, and those who eat cow's milk foolishly think they are benefiting their bodies. Men who take medicine should first carefully investigate and find out its nature. Why do not those who eat cow's milk consider and inquire into its origin? For instance, men beget children, and while the children are small they depend upon the milk for their nourishment: so it is also with beasts. But when men buy milk to eat, do they not do injury to the life of the calf? And is there not bitter hatred and distress in the minds of both cow and calf? Beasts cannot speak: how, then, are they able to tell the man that, in eating the milk of beasts, his body becomes like that of birds and beasts? But if men

to take strengthening medicine there are numberless other articles in the world that are beneficial. What necessity, then, is there for taking cow's milk? Besides this, the death and life of men have their fixed number and limit, and this cow's milk cannot lengthen out and continue the life of man. Since, then, all know the truth, that it cannot do this all ought to act with loving and benevolent spirit: especially all who receive this exhortation should keep from eating milk. The children of those who cause their families to refrain from eating milk will be preserved to grow up: they also will thus lengthen out their own lives, and will escape from evil in time of fatal epidemics. If such persons be able also to exhort others, who are ignorant of the first principles, to leave off the eating of milk, their descendants shall surely prosper. Published by the Hall of Good Exhortations. The xylographic blocks are deposited in the Ung Ling Kôh."

Chemistry.

ENGLISH AND FOREIGN CHEMICALS.

It is very much to be desired that the utmost care should be taken to ensure the reliability of all chemical products entering into commerce, whether of English or of foreign origin; but it is not necessary that for this end high prices and ancient processes should hold their ground merely out of prejudice against more economical methods of production. The best way to get at the truth is to encourage discussion among experts. An instance of the partial way in which this encouragement is given in some English journals has lately come under our notice. In October last the *British Journal of Photography* published a letter from "Samuel Fry," Kingston-on-Thames, stating that his experiments had led him to the conclusion that German pyrogallic acid was likely to cause failures in the intensification of the image, that is, was deficient in its power to reduce silver salts. He therefore recommended the general use of "English pyro. It is cheaper in the end." This statement was re-published in an almanack issued by the proprietors of the journal referred to, but we have been informed that the editor has declined to give any account of some experiments which have been reported by Dr. H. W. Vogel, of Berlin, which tend to an opposite conclusion.* Now as German pyrogallic acid is sold at just about one-half the price of that of English make, the question is one of some commercial importance, and perhaps Professor Vogel's report, which is now before us, may be of interest. He states that he experimented with a sample of pyrogallic acid from the manufactory of Hopkin & Williams, London, and with another made by E. Schering, of Berlin. He tested in each case the power of reduction of bromide of silver possessed by each. First, he remarks that bromide of silver can only be reduced by pyrogallic acid in the presence of alkalis, and that the intensity of the reduction increases with the quantity of the alkali, the concentration of the solution, and the influence of light and air, the latter in the presence of alkalis tending to oxidise pyrogallic acid. It is therefore necessary to carefully observe exactly similar conditions in each experiment for the purpose of comparison.

He took two yellow glass bottles, each of 200 c.c. capacity. Into each he put 8.5 c.c. of solution of nitrate of silver, containing 1.2 gramme. To this, in each case, 6 c.c. of bromide of ammonia solution were added. The bromide was slightly in excess of the quantity necessary to precipitate all the silver. Then to each liquor 2 c.c. of ammonia were added, and exactly at the same time to one a solution of 1 gramme of Schering's acid, and to the other a solution of 1 gramme of the English acid, in each case dissolved in 10 c.c. of alcohol, were added. The bottles were equally shaken for 10 minutes, and the contents were poured into vessels containing sufficient sulphuric acid to saturate the ammonia and check the reducing action. Vogel says that he obtained with the English acid .896 gramme of silver, with the German acid .937 gramme.

* Since this was written Dr. Vogel's report has been published in the *British Journal of Photography*.

Of course these results may be disputed, but Vogel is a good authority. We should like to learn whether English makers of pyrogallic acid have any demand from foreign competitors for the product which they charge so dearly for here.

Obituary.

APPLEYARD.—On January 26, Mr. Richard Appleyard, chemist and druggist, of 50 Park Lane and 4 Sherborne Road, Bradford. Aged 47 years.

BOOR.—On January 30, after several years' severe suffering, Sarah Ann, wife of Mr. G. C. Boor, Leonard House, Green Lanes, N., and St. Botolph, Bishopsgate, City. Aged 49 years.

DEANE.—On February 2, at Clapham, Jemima, widow of the late Henry Deane, of Clapham Common, in her 73rd year.

EVANS.—On January 6, Mr. Edward James Evans, chemist and druggist, Llanybyther, Carmarthenshire. Aged 36 years.

HUGGINS.—On December 15, 1879, Mr. Henry Huggins, chemist and druggist, Stansted. Aged 40 years.

HUGHES.—On January 7, at his residence, Rose Hill, Derby, Mr. Arthur Elijah Hughes, chemist and druggist. Aged 32 years.

JACKSON.—On February 5, at his residence, 147 Kensington, Liverpool, in his 65th year, Robert Raimés Jackson. Mr. E. R. Jackson was nephew of J. & R. Raimés, wholesale druggists, Edinburgh, and travelled for them for a number of years in the North of England, Lancashire, &c., and about 1852 opened the Liverpool house of Raimés & Co. and became managing partner, a position he occupied until his retirement from business in 1871.

JENNINGS.—On January 3, Mr. John Hartley Jennings, chemist and druggist, Burley Lawn, Leeds. Aged 52 years.

LYMON.—On January 10, Mr. Henry Limon, pharmaceutical chemist, Burgh-le-Marsh, Lincolnshire. Aged 48 years.

RANDALL.—On January 30, at Eastbourne, Eliza Anne Randall, eldest daughter of the late Edward Mayor Randall, Esq., of Southampton.

TENNANT.—On December 15, 1879, Mr. James Tennant, chemist and druggist, John Street, Pentonville, N. Aged 69 years.

Trade Notes.

THE BUSINESS of the late Mr. A. F. Robinson, of 5 Northgate, Darlington, has been purchased by his brother, Mr. J. Robinson. Mr. Scruton valued for the latter, and Mr. F. J. Brett for the vendor.

* *

MESSRS. BRADBURY & Co. (Limited), of Birkenhead, inform us that they have a most effective remedy for the *Distoma hepaticum*, or Liver Rot in sheep, for which they are offering agencies.

* *

MESSRS. BOURNE & TAYLOR are selling large numbers of a useful shilling thermometer, half-a-dozen mounted on a card. The readings are very distinct, being white on black. The range of the thermometer is from -40° to $+120^{\circ}$ Fabr.

* *

MESSRS. DOMEIER & Co., of Botolph Lane, have been appointed agents for the sale of the products of Messrs. C. F. Böhringer & Sons, of Mannheim, Germany, whose quinine, cinchonine, santonine, &c., are advertised in our pages.

MESSRS. JEFFREY & SON, of Cheltenham, have introduced hydrobromic acid jujubes, at the suggestion of a Cheltenham physician, and these form a very pleasant method for administering that remedy in throat affections.

* *

OUR ADVERTISEMENTS contain two announcements of the sale of chemists' businesses by auction. One sale is to take place at Huntingdon on the 20th inst., the other is a business at Brixton Hill, which will be sold at the City Mart on the 24th inst.

* *

WE NOTICE that Mr. Hickisson now sends out his 1s. pedestal cases of marking-inks (the daughter of the late John Bond's) in quarter-dozen cardboard cases, in which each is kept separate. This is a great improvement over the old method of packing in brown paper only.

* *

MR. P. A. STEVENS, for 20 years resident at Hyde Road, Hoxton, has transferred his business as chemist and druggist to Mr. R. J. Spencely. Mr. Stevens will continue to carry on his manufacture of silvery white guttapercha enamel as before.

* *

MR. C. A. GOSNELL left London on January 15 on a business tour of the world, to occupy 25 months. He represents Messrs. John Gosnell & Co., Allen & Hanburys, Alfred Bisshop, S. M. Burroughs & Co., the Kepler Malt Extract Company, T. & H. Smith & Co., and Wyeth Brothers. Mr. Gosnell's route will include the chief cities of India, China, Japan, Australia, New Zealand, the United States, and Canada.

* *

A COMPANY has been formed under the title of the New Zealand Drug Company (Limited), to acquire and carry on the business of Kempthorne, Prosser & Co., which has been established for many years at Dunedin, Christchurch, Auckland, and Wellington. The capital is 200,000*l.* in 2*l.* shares. The business is sold at actual cost to original partners who hold 25,000 shares fully paid up. The accountant's statement shows 15 per cent. net profits on cost value of sales for the last four years, and 23 per cent. average net profits on average capital during the same period.

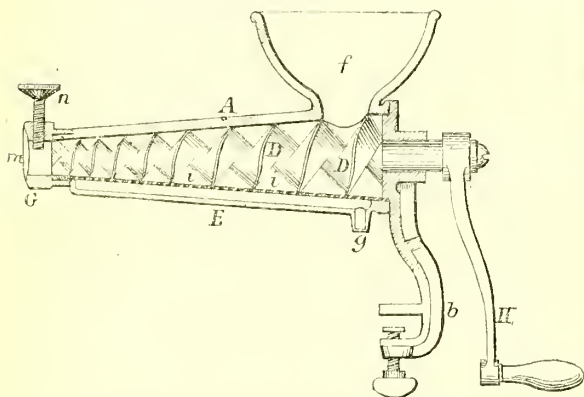
* *

WE HAVE TESTED, with most satisfactory results, the new preparations of extract of meat which have lately been introduced by Messrs. Nelson, Dale & Co. These present extract of beef combined with gelatine dried and cut into shreds similar to the gelatine which has been so long the specialty of the firm. The beef-tea made from it is of a very agreeable flavour, and is readily prepared. Extractum carnis and gelatine are also offered in other combinations for making various soups, and a soup with a good body and excellent flavour is quickly prepared from them.

* *

WE NOTE with pleasure that the well-known druggists' sundries business, known as "Bourne & Taylor's," which was established in 1847 by the late Daniel Bourne and John Taylor, has lately been transferred to Messrs. Edward Johnson and Thomas James Latimer. Mr. Johnson has been associated with the firm for 25 years, and has had the entire management of it for the past 12 years, while Mr. Latimer has represented the firm for the past seven years all over the country. These gentlemen have largely developed the business in recent years, and their energy is not likely to relax now. Mrs. Bourne still retains a share in the concern, and the style of the firm will still remain Bourne & Taylor.

NEW TINCTURE-PRESS.—The woodcut represents the vertical section of a new tincture-press which is being brought forward in America, and which looks like a great improvement on the older forms. The marc to be expressed is placed in the hopper *f*, and is forced along the cylinder *A* by turning the handle *H*, which rotates the screw *D D*. As both screw and cylinder are tapering the pressure gradually increases on the marc till it is discharged from *m* uniformly dry. The end *G* is moveable, and the pressure can be increased at pleasure by the screw *n*, which regulates the



size of the outlet *m*. The black line *ii* is a perforated brass plate, which can be had with perforations of different sizes. The expressed liquid escapes through this into the channel *E*, and is delivered at the spout *g*. The marc cannot clog the holes in the plate *i*, as the edge of the screw shears off what projects, and the rest is forced through. This press answers particularly well for hops, arnica flowers, opium, and other bulky residues, but it is not suited for sticky, tenacious, and very finely-powdered drugs.



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, successor to L. de Fontaine-moreau & Co., 4 South Street, Finsbury, London; and at Paris and Brussels.]

Applications for Letters Patent:—

- Bottle-stopper.**—No. 5264.—N. Fritzner, of Berlin, Germany, merchant and manufacturer. Improved stopper for bottling effervescent liquids. Dated December 24, 1879.
- Charcoal and Phosphates.**—No. 5286.—H. Lissagaray, of 11 Bessborough Gardens, Piccadilly, London. Improvements in the treating of fish and fish residues for extraction of oil, and converting the residues into charcoal and phosphates and ammoniacal substances. Dated December 27, 1879.
- Cork-extractors.**—No. 5246.—J. G. Wilson.—A communication from D. Winkler, of Maskau, Germany. Improvements in corkscrews or cork-extractors. Dated December 23, 1879.
- Dental-plates.**—No. 5117.—J. H. Gartrell, of Penzance, Cornwall. Improvements in apparatus for moulding articles of celluloid, india-rubber, and similar materials, chiefly designed for the manufacture of dental-plates. Dated December 13, 1879.
- Drop-bottles.**—No. 5104.—A. M. Clark.—A communication from Raonl, Bravais & Co., of Paris. Improvements in or applicable to drop-bottles for measuring out medicinal and other liquids. Dated December 13, 1879.
- Filter.**—No. 38.—S. H. Johnson, F.C.S., of Stratford, Essex. Improvements in filter-presses. Dated January 5, 1880.

- Galvanic Batteries.**—No. 5219.—T. Coal, of North Brixton, London electrician. Improvements in galvanic batteries. Dated December 20, 1879.
- Magnetic Curative Appliances.**—No. 5.—F. Bapty, of 31 Park Square, Leeds, medical electrician. Improvements in magnetic curative appliances. Dated January 1, 1880.
- Medicinal Bitters.**—No. 5178.—H. Davis, of Liverpool. An improve bitters to be used as a medicinal or other leverage. Dated December 17, 1879.
- Soda and Potash.**—No. 5228.—H. Brauner, of Widnes, Lancashire alkali manufacturer. Improvements in the manufacture of soda and potash. Dated December 22, 1879.
- Sulphite of Lime.**—No. 5109.—R. Powell, of Liverpool. Improvements in the manufacture of sulphite of lime. Dated December 13, 1879.
- Sulphates of Soda and Potash.**—No. 5105.—C. Wigg, of Liverpool manufacturer. Improvements in the manufacture of sulphates of soda and potassa. Dated December 13, 1879.

Letters Patent have been issued for the following:—

- Ammonia.**—No. 4338.—G. N. Tucker.—A communication from N. Basset, chemist, Paris. Improvements in the manufacture of ammonia and its salts, and in the apparatus employed for this manufacture. Dated October 24, 1879.
- Artificial Teeth.**—No. 2771.—G. W. Von Nawrocki.—A communication from R. Telschow, of Berlin, Germany. Improvements in the manufacture of artificial teeth, and in apparatus therefor. Dated July 7, 1879.
- Bottles.**—No. 2753.—A. Deleour and J. B. Admant, both of Paris. Improvements in bottles for decorative, advertising, and trade mark illustrating. Dated July 7, 1879.
- Bottles and Stoppers.**—No. 3935.—H. Barrett, of Hampton. Improvements in bottles and stoppers, and in apparatus for filling or charging the same. Dated September 30, 1879.
- Bottle-stoppers.**—No. 1861.—H. Barrett, of Hampton, Middlesex. Improvements in stoppering bottles for containing aërated or gaseous liquids, and tools or appliances therefor. Dated May 10, 1879.
- Caustic Alkalies.**—No. 3803.—G. I. J. Wells, of Widnes, Lancashire, alkali manufacturer. Improvements in the manufacture of caustic alkalies and in apparatus therefor. Dated September 22, 1879.
- Filters.**—No. 2218.—H. Harris, of Hackney, London. Improvements in filters. Dated June 4, 1879.
- Galvanic Batteries.**—No. 4346.—R. C. Anderson, of Wood Green, civil engineer. Improvements in galvanic batteries. Dated October 24, 1879.
- Galvanic Battery.**—No. 2905.—Mr. C. H. Carlson, of Lee, Kent. An improved galvanic battery. Dated July 16, 1879.
- Hydrocarbons.**—No. 2860.—S. Pitt; a communication from Dr. P. Greiff, of Munich, Germany. Improvements in the production of hydrocarbons, such as benzole, toluole, scylole, naphthaline, anthracene, and their homologous substances which are suitable for the manufacture of colours. Dated July 14, 1879.
- Sulphur.**—No. 3194.—W. Weldon; a communication from A. R. Pecbiny, of Salindres, France. Improvements in obtaining sulphur from a bye-product of the manufacture of alkali. Dated August 8, 1879.
- Sulpho-acids of Rosaniline.**—No. 2823.—C. D. Abel; a communication from E. Jacobsen, of Berlin, Germany. Improvements in the production of the sulpho-acids of rosaniline and of the colouring matters derived therefrom, as also of alizarine and purpurine. Dated July 11, 1879.
- Sulphate of Soda and Potassa.**—No. 2899.—J. Hargreaves, of Widnes, Lancashire, chemist. Improvements in apparatus or appliances for the manufacture of sulphate of soda and potassa. Dated July 10, 1879.
- Volatilising Cresylic Acid.**—No. 2645.—J. H. Valentinc, of Providence, R.I., United States. Improvements in the method and apparatus for volatilising cresylic acid. Dated June 30, 1879.

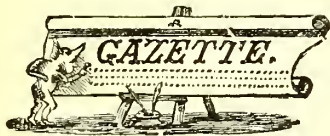
Specifications published during the month:—

Postage 1*d.* each extra.

1879.

1481. W. Müller and E. Geiseuberger. Manufacture of ammonia. 6*d.*
1521. G. H. Jones. Lathes for dental and other uses. 6*d.*
1788. C. F. Wood. Constructing, stoppering, and filling bottles and jars. 8*d.*
1818. L. Vallet. Stoppers and bottles. 6*d.*
1863. T. Fardon. Manufacture and drawing-off of aërated liquids. 6*d.*
1864. R. Meldola. Colouring matters. 4*d.*
1865. H. Parkes. Manufacture of compounds of nitro-cellulose. 4*d.*
1869. A. & J. D. Scott and T. R. Ogilvie. Purifying saccharine substances. 4*d.*
1875. H. Schildberg. Apparatus for sprinkling scents, disinfectants, &c. 2*d.*
1888. H. Cold. Elastic rings for jars and bottles. 2*d.*

1895. H. Barrett and J. Bailey. Stoppers for bottles. 4*d*.
 1917. W. P. Thompson. Holders for dental and other small tools. 4*d*.
 1960. S. Canning. Manufacture of glass bottles, &c. 6*d*.
 1966. W. Battersby. Stopping bottles. 6*d*.
 1970. J. Fordred. Treatment and purification of cod-liver oil. 4*d*.
 1991. T. Wood. Bottles and stoppers. 6*d*.
 2006. J. B. Spence. Treatment of metallic sulphides. 4*d*.
 2101. W. P. Thompson. Manufacture of aluminium, sodium, &c. 2*d*.
 2169. M. Lumb. Bottles. 2*d*.
 2204. J. Pattinson. Manufacture of soluble phosphates. 2*d*.
 2241. J. Wilkinson. Apparatus for shaping the mouths of bottles, jars, &c. 6*d*.



LIQUIDATIONS.

- DLORE, HENRY LESSEY, 1 Withy Grove, Manchester, grocer, and 46 Oldham Road, Manchester (trading as Jonathan Brown & Co.), druggist and dyer. January 5.
 CARTNER, DAVID, 28 Parkholme Road, Dalston, and 74 Little Britain, late 2 Orchard Buildings, Haggerstone, wholesale druggist. January 22.
 CATTLE, HENRY STEED, Retford, late chemist. January 12.
 EASON, JOHN, 70 Bargates, Leominster, late chemist and druggist. January 31.
 ELLIS, JAMES, 2 O-borne Terrace, Southsea, chemist. January 5.
 HOWELL, EVAN JOHN, Market Square, Narberth, chemist, grocer, stationer, seedsman, and wine and spirit merchant. January 8.
 JAKENS, JOSEPH, 77 Plum Trees, Walmersley Road, and Limfield, Bury, chemical manufacturer. January 26.
 POATE, STEPHEN, 1 Candahar Place, Landport, chemist. January 27.
 SHRIMPTON, Frederick George, 12 Market Street, and 21 New Inn Hall Street, Oxford, chemist and lodging-house keeper. January 12.
 WEBSTER, JOHN HENRY, late 96 Westborough, Scarborough, chemist. January 30.
 WILLIAMS, RICHARD EUSTACE, The Mumbles, near Swansea, chemist and druggist. January 27.
 WILLIS, COTTINGHAM, trading in partnership at 55 High Street, Lynn, and Hunstanton, and Terrington St. Clement's, also of Winch, chemist and manure and seed merchant. January 21.

PARTNERSHIPS DISSOLVED.

- GROSVENOR, T. C. & C. H., 29 Sussex Place, Brompton, and 19 Notting Hill Terrace, chemists. December 31. Debts of the Sussex Place business by T. C. Grosvenor, and of the Notting Hill Terrace business by C. H. Grosvenor.
 MACKAY, SELLERS & Co., 1 and 2 Bouverie Street, Fleet Street, London, wholesale chemists. January 15. Debts by J. B. & J. A. D. Mackey.
 SKINNER, JOHN, & AITKEN, JOHN, M.D., 178 Govan Road, Govan, chemists and druggists. December 31.

BANKRUPTS.

- BOOTH, MARY ANN, Old Hall Street, and Long Street, Middleton, chemist and wine merchant. January 12.
 HARRISON, WILLIAM APPLEBY, & YOUNG, ALFRED, Abbey Lane, West Ham, Essex, manufacturing chemists. January 21.

DIVIDEND.

- LUCAS, WILLIAM, 132 Broughton Road, Salford, chemist and oil merchant. First and final of 1*s*. 1*d*., at J. Bourdman's, 26 Pall Mall, Manchester.

THE PHARMACEUTICAL EVENING MEETINGS.—A critical correspondent writes:—We believe it was Sir G. C. Lewis who said that life would be very enjoyable but for its pleasures. In a like hemi-paradox we may lay it down that the meetings of the Pharmaceutical Society would be very pleasant and instructive if it were not for the matter which is brought forward. The advertised papers we expect to hear read and discussed, and only thoughtlessness or bad management will allow other matters to be interposed between them and the meeting. We say nothing as to the merit of the sometimes numerous subjects which are sandwiched between the minutes and the expected papers; but a want of system which forces a paper to stand over for a month, or be taken as read when there is ample time for reading it if the meeting be properly conducted, provokes remark, and we put it to the Evening Meeting Committee if there is not room to popularise the meetings by standing to their engagements.

ABSTRACTS OF SPECIFICATIONS.

FOR permission to print the following we are indebted to the courtesy of the *Engineer*:—

1634. Solvent for Gums, &c., W. F. Jack.—*Dated April 25, 1879.*—(Not proceeded with.) 2*d*.

The solvent is obtained from wood tar or the oils thereof.

1434. Cartner's Pill-coater, D. Cartner.—*Dated April 10, 1879.*—(Not proceeded with.) 2*d*.

The pills are placed in a spherical vessel mounted on the end of a shaft, which is caused to revolve. The sugar or other coating is placed in the vessel with the pills, and by the rotary motion the pills are coated.

1309. GASEOUS COMPOUND FOR PRODUCING MOTIVE POWER, W. R. Lake.—*Dated April 2, 1879.*—(A communication.) 6*d*.

The compound consists of a mixture of the vapour of bisulphide of carbon and petroleum oil, and is produced by projecting bisulphide of carbon into a boiler supplied with heated petroleum oil.

1705. CHALK AS MANURE, A. Steberg.—*Dated April 30, 1879.*—(A communication.)—(Not proceeded with.) 2*d*.

Calcium carbonate is crushed to powder and mixed with water, and then allowed to settle, the water being drawn off and the calcium carbonate dried. When dry it is re-ground, and is ready to be used as a fertilising agent.

1748. OZOKERITE IN LUBRICANTS, F. P. Warren.—*Dated May 3, 1879.*—(Not proceeded with.) 2*d*.

Ozokerite is mixed with grease or oil in the proportion of two-thirds of the former to one of the latter, and is used as a cheap lubricant.

3217. MANUFACTURE OF Blasting Powder, W. R. Lake.—*Dated September 14, 1875.*—(A communication.)—(Not proceeded with.) 2*d*.

The powder is made up of nitrate of soda or saltpetre, sulphur, and charcoal, combined with peat, metallic sulphates, as well as coal of a hard nature, and the oils or fats of animals, or tar of any kind.

2003. MANUFACTURE OF Aerated Waters, M. Morris.—*Dated May 20, 1879.* 6*d*.

This patent relates, first, to the arrangement of the syrup injector; and secondly, to the use of automatic apparatus, whereby the rising and falling of the gasholder is caused to act upon the acid tap, so as to diminish or increase the amount of acid admitted into the gas generator, and to give an audible signal to the attendant when the supply of gas has become nearly exhausted.

1865. COMPOUNDS OF Nitro-cellulose, H. Parkes. *Dated May 10, 1879.* 4*d*.

This consists in softening the nitro-cellulose by a solvent made with tetra-chloride of carbon and camphor, and the nitro-cellulose so softened may be moulded or rolled into various forms, the softening action being aided by heat and pressure.

1866. Varnish, H. Parkes.—*Dated May 10, 1879.* 4*d*.

A varnish composed of nitro-cellulose dissolved in well-known solvents and shellac, with or without castor oil or glycerine, is used to coat metal, paper, glass, wood, and textile and felted substances.

2101. Aluminium, Sodium, &c., W. P. Thompson.—*Dated May 27, 1879.*—(Not proceeded with.) 2*d*.

This consists mainly in the use of fluid iron as a reducing agent, or as an assistant to the actual reducing agent, hydrogen, or carbon, the reduction being effected in a converter resembling somewhat a Bessemer steel converter.

2234. Plaster and Pad FOR THERAPEUTIC PURPOSES, W. R. Lake.—*Dated June 5, 1879.*—(A communication.)—(Complete.) 4*d*.

The pad consists of a bag or cushion to be filled with certain herbs and drugs. The plaster has an opening for the reception of the pad. They are connected together by sewing or otherwise. A piece of cloth or other material is placed over the plaster to prevent its adhesion to the clothing.

2410. PURIFYING AND Deodorising CRUDE PETROLEUM AND OTHER OILS, H. F. Howitt.—*Dated June 18, 1879.*—(Complete.) 6*d*.

The petroleum is subjected to the action of chlorine or other gas in such a manner that a certain portion of the hydrogen element is replaced by an equivalent of the gas. The gas employed is saturated with water or other liquid, so that its affinity for the hydrogen element in the oil is developed and made active.

1734. Pneumatic EXHAUSTING Apparatus for Medical Purposes, W. Brietley.—*Dated May 1, 1879.*—(A communication.) 6*d*.

The apparatus consists of a pneumatic pump made to act upon an india-rubber disc, which is applied to any part of the body so as to open the blood vessels and finest capillaries in which endosmosis and exosmosis is produced for an energetic compensation of derangements caused by an incorrect assimilation or a deficient excretion.

Exchange Column.

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word. In condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of THE CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The Publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

Deposit of Money.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us. We shall acknowledge receipt to both parties by post-cards, and shall only pay it away on the advice of the remitter. Whether returned to him or paid to the seller, we shall charge a commission of 2½ per cent. on any money thus passing through our hands, and not less than 6d. on any single transaction. This arrangement should entirely prevent any cause of complaint or dissatisfaction arising out of this section of THE CHEMIST AND DRUGGIST.

FOR DISPOSAL.

Dental and Surgical.

- A case of Maw's forceps, eight, good as new, price 11/18. Address, Chemist, Pharmacy, Staple Hill, Bristol.
- Tooth forceps; set of 11 instruments, with gum-lance, in mahogany case, n.v., value 4l.; for sale or exchange. John Carman, Apothecaries' Hall, Holywell.
- Teeth extracting forceps.—Upper incisors and canines, lower ditto, upper stumps, lower wisdom, lower molar, upper molar right, upper molar left. First offer over 1/ will take them, 11/35A.
- Dr. Richardson's ether apparatus, with foot-bellows for producing local anaesthesia, in box with straight, curved, and double sets complete, nearly new, cost 31s., will take 25s. J. Munday, 35 High Street, Bridgnorth.
- Maw's tooth-instruments in leather pouch, as good as new; key with three claws, forceps, wisdom, upper and lower bicuspid, and stumps, two-bladed gum lancet. What offers? Brown, Chemist, North Shields.
- 26 American pattern tooth forceps, new, in leather pouch (see C. Ash & Son's catalogue), price 2s. each. Comprising upper and lower bicuspid, upper centrals, incisors and canines, lower incisors and canines, upper and lower wisdoms, upper molar, right and left, lower molars, upper and lower stumps, &c. R. Colton, 215 Gibraltar Street, Sheffield.

Drugs and Chemicals.

- 1 lb. genuine ol. menth. pip. Mitchum, 1877, 44s. 113/14B.
- For 1 oz. bottles Howard's Quina Sulph. What offers? 118/27.
- Best Turkey opium, 1 lb. 5 oz., and 4 oz. morph. hydroch., take one-third less than any list price. 118/28.
- Genuine English honey, 8/1 per lb. Sample sent for stamp. Langman, Chemist, Haddenham, Cambs.
- Oil mint, H.G., 1/5s.; good honey, 6½d.; syr. rhæadaos, 6d.; morph. hydro., 8s.; opii ture, 18s. 115/4.
- About 4 cwt. fine Norfolk beeswax, genuine, good colour; price, 9/10s. per cwt. James Watson, Chemist, Rose Corner, Norwich.

Surplus Stock.—Pure beeswax, good colour, 1s. 8d. per lb.; carriage paid 100 miles on 56 lbs.; samples sent. Walton, Chemist, Hull.

25 off 1st prices, all good.—8 oz. ext. lupuli, 14 lbs. ras. saral. rab., 12 lbs. ras. cornu, 1 oz. claterium, 56 lbs. common juice, 28 lbs. emp. lini, 28 lbs. empy, 1 oz. veratria, 1 lb. ol. lavand. exot., 1 cwt. fol. sennæ, 84 lbs. cort. granat, 28 lbs. grd. ivory, also several patents. List sent. Fowler, Boston.

Optical.

Several dozen Foller spectacles, concave and convex, 20s. d. z.; sample 24 st mps, invoice price 30s. doz. Kneen, Auerley Road, S.F.

Spectacles for sale or exchange, six dozen, Druid's quite new invoice, price 6/1. 9s. 6d.; no reasonable offer refused. D. S. Anderson, Forfar, N.B.

Herbert & Godfrey's spectacles, ½ doz. 5/1s., ½ doz. 4/1s., ½ doz. 3/1s., ½ doz. 15s., ½ doz. 18s., ½ doz. 30s., ½ doz. 30s., ½ doz. 30s., 1 optimeter 2s. 6d., case 15s.; all in good ord. r. cost 4/15s. 6d.; what offers? cash, patents, or drugs. A. McIver, Dingwall.

Educational.

Skull in box, marked plain with the alphabet of phrenology, price 30s. Parke, East Dereham.

A complete set of books for preliminary examination, 7s. 6d. Apply, Wm. Shepperson, 207 Alfreton Road, Nottingham.

Student's herbarium of the officinal and other leading indigenous plants (120), mounted and named, 10s. 6d. Tully, Chemist, Tunbridge Wells.

Fifty questions asked of a successful student at last Minor, 2s.; 30 prescriptions (each and difficult) given to dispense at Minor during past session, 2s.; reagent labels for Minor students, showing formulæ, equations, and other useful knowledge, 1s. 6d.; lot of cheap books for students; send stamp for list. Saunders, Tutor, 79 Gaisford Street, N.W.

Judd's preliminary works, "Cæsar," "Thema," "Arithmetic," "Metric System," "Examination Papers, with Workings, for 1879," "Short Cut to the Preliminary," 6s. 6d. the lot, cost 12s.; Owen's "Pharmacy," 10/1.; Ainsworth's Latin Dictionary, 3s. H. Matthews, Jeffereys' Library, 84 Waterloo Road, S.E.

3/1. 3s. Statham's chemical cabinet, almost new, price 2/1. Southall's materia medica cabinet, with Bentley's "Botany," Wisl's "Elements of Pharmacy," dispensing memoranda necessary for the Minor, &c., price 25s. Sent carriage free on receipt of P.O.O. Address, Alfred Smith, North Street, Winchcomb, near Cheltenham.

Immediate Disposal for Cash.—A first-class chemical cabinet, chemicals, and apparatus, only been used once, and quite new, original cost about 10/1., to be sold for 6/1.; also Tully's materia medica cabinet, guinea size, and Tully's 7s. 6d. herbarium, neither have been used, and are just as received, cash 1/1. E. K. Smithson, 208 Freeman Street, Grimby.

Shop Fittings.

Neat marble fountain for shop; bargain; particulars free. 105/27.

Fixtures for shop, 14 ft. by 12 ft., for 32/1. 10s. R. Tomlinson, Shop-fitter, 15 St. Paul's Square, Birmingham.

Bargain.—One of Dows Clark's No. 2 soda-water machines, in good condition, apparatus for bottling syphons attached, will take half the cost price; also a large cistern water-filter. Halls, Chemist, Newark.

Sale or exchange, counter glass and cases other fixtures. Moore, Chemist, Brierley Hill.

Six dozen 16 and 20 oz. gold-labelled stoppered shop-rounds, 6s. per dozen; two 2-gallon show carboys, 4s. each; pill machine to cut 12 5-grain pills, 4s. 6d. T. Bridger, Arlesley Ballock.

Two specie jars, as Maw's fig. 1, 27 inches high, mahogany stands; mahogany glass case, bent top, 3 feet long, 18 inches wide, 7½ inches high, as Maw's fig. 102; about 200 shop bottles, various, from 2 oz. to 40 oz. Bates, 6 Christ Street, Poplar.

Handsome show-case, fig. 3 Maw's catalogue, cost 11/1., good as new, what offers? pair Avery's beam scales (28-in. beam), weigh four Winchester at once, copper pans, take 17s. 6d.; Spong's advertising lamp, revolving star, take 20s. Ferguson, Chemist, Leeds.

Surgeons and Chemists.—A bargain, stock of a deceased chemist's shop, consisting of 100 shop bottles, jars, scales, window show-bottles, rest of mahogany drawers, and about 200 stock bottles, with contents, &c., what offers? Entwisle, 153 Princes Road, Kennington, S.E.

Nest mahogany-painted drawers, 12 feet by 4; nest small drawers, 4 feet square; nest small drawers, 40 inches by 46, gold labelled, for garden seeds; a mahogany plate-glass flat counter-case, 54 inches by 30; a new iron cistern, 100 gallons, with brass tap and screw bung perfect; what offers for original bottles H.G. Hotch, ol. menth. pip. 2 a cupboard with two glass doors, 38 inches square, 10 inches deep. Edward Home, Chemist, Barn ley.

A Bargain.—Counter-cases, all plate-glass, fig. 16, 3 ft. long, 40s.; 4 ft. 6 in. long, 50s.; fig. 41, 4 ft. long, 80s.; 5 ft. long, 6/1.; fig. 100, 3 ft. long, 60s.; 3 ft. 6 in. long, 70s.; 5 ft. long, 6/1.; fig. 105, 6 ft. long, 7/1.; 8 ft. long, 8/1. 10s.; fig. 99, 6 ft. long, 7/1.; fig. 96, 5 ft. long, 5/1. 10s.; fig. 101, 4 ft. long, 90s.; fig. 95, 4 ft., 90s.; a number of other sizes; tooth-brush cases, fig. 52, 30s.; double-bend ditto, 27s.; 6 ft. wall-case, fig. 199, 12/1. 10s.; 12-ft. fixture, 197, 18/1.; 16-ft. do., do., 22/1. E. Natali, 207 Old Street, E.C.

A 6-ft. dispensing screen, as Maw's 164, with tablet, 7/1.; several very handsome dispensing screens, as Maw's fig. 78, from 4 ft. to 6 ft. 6 in., from 4/1. to 5/1.; sponge case, fig. 90, 70s.; fig. 92, 5/1., plate glass; 3 ft. 6 in. plate-glass ease, Maw's fig. 3, equal to new, 6/1. 10s.; a 3-ft. 6-in. ditto, with square case in front, 4/1.; a 6-ft. 10-in., as fig. 43, to open in front in three divisions, 7/1. 10s.; a 3 ft. bent plate-glass counter case to open in front and back, 60s. E. Natali, 207 Old Street, E.C., almost opposite Great Eastern Street.

Bargains.—Glass displacement apparatus, ½-gall., Maw's fig. 1, 20s.; ½-gall. tincture-press, 15s.; leech aquarium, on stand, 9s.; 11-in. evaporating dish, with lip, 1s. 6d.; No. 10 Wedgwood mortar, 7s. 6d.; 24 5 and 3 grain reversible pill machine, 20s.; 24 3 grain pill machine, new, 16s. 6d.; cut paper-stand, mahogany, 8s.; 8-ft. 3-in. mahogany top counter, fitted with 20 drawers, 6/1. 10s. Every requisite for chemist's shops: Bottles, jars, carboys, specie-jars, &c.; a pair specie-jars, glass-gold covers, 27 in. high to top, Royal arms, equal to new, 5/1.; 1 doz. turquoise blue jars, as Maw's fig. D, elaborately labelled in gold, with glass-gold covers, equal to new, 8s. each, worth 13s.; junibe-jars, gold-labelled, 2s. 9d. each; 2 set of three earthenware vessels, as Maw's page 114, illustrated, "Honey," "Leeches," "Tamarinds," 15s. set, blue and gold. E. Natali, 207 Old Street, almost opposite Great Eastern Street.

14-ft. 8-in. plate-glass cupboard, Spanish mahogany frame, in very good condition, very cheap, suitable for the under-part of wall-case; one each dispensing screens, 7 ft. and 6 ft. long, with glass case at each side, and silvered plate-glass centre, with marble slab in front, the cases have silvered-glass backs and shifting shelves, with tablets over cases "Dispensing Department," 8l. 10s. each, worth double; sponge case, as Maw's fig. 92, 5l.; desks and cases, fig. 21, 65s.; 8-ft. dispensing screen, fig. 165 Maw's, with silvered-glass back and tablet on top, 9l., a bargain. E. Nutall, 207 Old Street, almost opposite Great Eastern Street.

Literature.

Fowne's "Chemistry," in good condition, 120/8.
Chemist and Druggist, 1878, one missing, and 1879 perfect, 10s. 113/14c.
 Carpenter's "Human Physiology," edited by Power, eighth edition, not soiled, cost 30s. Ginn, Rothwell, Kettering.
 This year's Diary, highest offer, new; this year's *Chemist*, half price, no postage, three days after publication. Coeking, Sittingbourne.
Chemist and Druggist since 1869, in good condition; what offers? Cash, patents, or drugs. A. McIver, Dingwall.
 Attfield's "Chemistry," 4th edition, Fowne's "Chemistry," 11th edition; in good condition; half price. Adams, Chemist, Malvern.
Pharmaceutical Journal, 9 vols., third series, in good condition, complete, 3 vols. bound, 45s. 108/11.
 Twelve vols. *Chemist and Druggist*, bound in blue cloth, exchange anything useful, drugs or patents. 110/23.

What offers in cash for *Pharmaceutical Journals*, bound, 29 vols. in all, from 1854 down to 1873, and 3 vols. unbound, from 1873 to 1875; must be sold. Judson, Wycombe, Bucks.
The Chemist and Druggist for 1865, '66, '69, '70, '72, '73, '75, '76, '77, '78, '79, a few missing; "Year-book of Pharmacy," 1874-75; 1-gallon glass percolator, graduated; what offers, or exchange? Lea, Folkestone.

Smellie's "Midwifery," 3 vols., and 1 vol. of plates, 7s. 6d.; Culverwell's "Green Book on Syphilis," with numerous illustrations, scarce, 3s. 6d.; Attfield's "Chemistry," 1877, 5s. Delivered free in London. 113/14A.
 Attfield's "Chemistry," Wills' "Materia Medica," Wills' "Pharmacy," Rivers Wilson's "Chemistry," as good as new, for 1l., carriage paid. Rogers, 65 Rice Lane, Walton, Liverpool.

The Practitioner, monthly, post free, Tait's "Diseases of Women," Acton's "Reproductive Organs," Tanner "On Disease," "Frank Fairleigh," Forrest's measuring apparatus for paraffin. J. Dove, Sherburn, S. Milford.

Medical books for sale; among others Aitken's "Medicine," Watson's "Physics," Erichsen's "Surgery," Barlow's "Medicine," Redwood's "Pharmacy," Beasley's "Formulae," Proctor's "Pharmacy," Year-books, from 1870 to 1875, ten years *Pharmaceutical Journal*, bound and unbound, five years *Chemist and Druggist*, unbound, but clean and perfect. Many others too numerous to mention in advertisement; detailed list will be sent. Charles Andrews, Hunstanton, Norfolk.

Formulæ.

For composition and ink for graph, 1s. 3d. each. "Grapho," Geneva House, Budeford.
 Chlorodyne, good as Collis Browne's, easily made, mix perfectly with water, recipe 5s., bargain; aqua lavand., finest quality, cheaply made, only 2s. 6d.; cold cream, good as Patey's, 1s. G. Roberts, Southam, near Rugby.

Nubian blacking.—Recipe for preparation similar in appearance, smell, and effect to above, with directions, 2s. 6d. Wittstien, Lower Broughton, Manchester.

Tooth-wash, highly fragrant, lathers freely, also tooth-paste, best extant, both are first-class recipes, preparations sure to sell well, 6s. each. 102/2s.

Two hundred formulæ, valuable and effectual remedies (medical, veterinary, and proprietary), all genuine; bear good profits and command an extensive sale; copied neatly in book for 1l.; a rare chance. "Medicus," 43 Tontine Street, Folkestone.

Indestructible marking-ink (*stine* silver), usable with any pen, requires no heating, writing unobliterated by chemicals; brilliant polish for leather (resembles "Nubian" blacking), soluble essence of ginger (equal to Hay's), cherry tooth-paste (never ferments), elixir (or vinum) pepsine, toilet vinegar (equal to Rimmel's), with several others. Send stamp for list, all genuine and reliable, 5s. each (five for 1l.). "Analytical Chemist," Herbert Hebblethwaite, Cumberland Market, N.W.

Fragrant foaming dentifrice (similar to Floriline); glycerine jelly (perfectly transparent); cherry tooth paste (never ferments); brilliantine (inscapable); lime-juice and glycerine (inscapable and perfectly white); splendid black ink (never corrodes steel-pens); marking ink (black or red); effervescent fruit saline (resembles Eno's), pill-coating (pearly white, no mucilage or mastic used); magic neuralgic drops (never-failing remedy); quinine and iron tonic (resembles Pepper's); excellent chilblain paint; cough mixture (clear red, effective, and agreeable); with many others; send stamp for list. The toilet articles are identical with those prepared by a renowned West End perfumer; the others are equally good; all inexpensive to prepare; 5s. each (five for 1l.); inquiry letters must be prepaid. "Analyst," care of Mr. Warner, 79 Gaisford Street, N.W.

Miscellaneous.

One dozen each size 1s. and 2s. Scott's cigarettes; what offers? 110/35b.

For cash, nearly new, five-barrelled central-fire revolver; what offers? cost 26s. 117/16.

Half-gallon displacement apparatus, shape fig. 1 Maw's, York Glass Company's, cost 30s. Ginn, Rothwell, Kettering.

Cocking's double-action pill machine, new, cost 10l., 7l. 5s.; burnisher, 4s.; Maw's bougie mould, 5s. 111/25.

Several pounds gold bronze, oz. packets, offers wanted. Sample packet eight stamps. Owen, Chemist, Great King Street, Birmingham.

Twenty-six 13 3/4 bottles, 15 3/4 bottles Robert's vegetable corn-solution, clean; 1 1/2 cwt. yellow ochre; what offers? 111/23.

Two large show globes, cut stoppers, specje jar, Maw's 20; quantity petroleum lamps, bargains. B., 11 Bridge Street, Goolle.

Strong, healthy, docile, straight-limbed mastiff dog, 16 months old, good guard, pedigree and particulars given. Highest offer over 5l. accepted. 110/35c.

To be sold, cheap, 600 effectively-printed showcards for mounting insect powder; also three gross tin boxes. A. D., 80 Fleet Street, London, E.C.

A small stock of sauce, similar to Worcestershire, to be disposed of, excellent. 4s. gallon; write for sample. "Heilsh," care of house-keeper, 19 and 21 Queen Victoria Street, London.

Pair French scales, cost 10s., 2s. 6d.; good silver lever watch, maker Pitt, Manchester Square; in good going order, 3l.; watch free and registered anywhere on receipt of money. 113/14b.

170 gold label d quart and pint syrup and other bottles, 6 colour bottles capacity 4 g-galons, and 50 blue octagon-shaped tinted 8 and 16 oz. poison bottles, circular stands for cartons, medical books. Leaver, Devons Road, Bromley, E.

Chemist and Druggist, unbound, clean, five years, 1871 to 1879, price 22s.; strong soda-water basket for twelve, good as new, 4s. 6d.; scales on mahogany stand, with draw, 18s. 6d.; 99 numbers (consecutive) *Pharmaceutical Journal*; offers. Stead, Lees, *via* Manchester.

Rare bargain.—69 w.m., 86 n.m., 40 oz., 17 n.m., 18 w.m., 16 oz., 16 n.m., 14 w.m. 8-oz. white flint stoppered bottles; 28 4-lb. and 32 1/2-lb. blue jars, with lids; new enamelled evaporating-dish, 18 inches across, 4 inches deep, handles and spout; free to rails for 7l. 111/20.

Cheap, a large quantity of pots, suit the wholesale trade, new; mineral water, ginger-beer bottles, and nested boxes for same. J. W. Adams, 110 Robert Hall Street, Salford.

Bargains.—Sonthall's materia medica specimens, complete, each neatly mounted in seidlitz boxes, labelled, excellent for museum or private study, 20s.; Royle's 5th edition 4s. 6d., Public School Latin Primer, 1s., "Aids to Botany," 6d. Richards, 18 Picking Place, Bayswater.

Best red lead, 5 cwt., at 21s.; homœopathic show-case, cost 37. 3s. from Ashton's, price 17.; marble mortars, 18 inch, 18s.; 12 inch, 6s. 6d.; 1/2-gallon tincture-press, on legs, new, 12s.; swan carboy, 30 inch, 15s.; specje jar, 18 inches, 22 inches, with gill cap., perfect. 26s.; shop-scales, 10-inch beam, drawers and weights good as new, 20s. Floyd & Hicks, Bury St. Edmunds.

WANTED.

Large copper still. Sawyer, 61 Cheapside. Homœopathic counter show-case, empty. Casely, Chemist, Camden Town.

Galloway's "Qualitative Analysis." Hyde, Clowne, Chesterfield.

A work on physics, suitable for a Minor student. 99/20.

Crews' disinfecting fluid. Send quantity, sizes, and price to Crasswold, Bury St. Edmunds. Soda-water machine, wanted to purchase one. "Alpha," 8 Charlwood Terrace, Putney.

Morphia mur. and quinine; state make and quality. 115/7.

Homœopathic Pharmacopœia, Acton's works. Coeking, Sittingbourne.

Allan's anti-fat, clean large compo mortar. 117/15.

"Cæsar in Gaul." H. Verity, Pateley Bridge, *via* Leeds, Yorkshire.

Beasley's "Druggist's Receipt-book," latest edition; state price. Macfarlane, Wislaw.

Two good human leg or thigh bones, cheap. Warriner, Chemist, Nottingham.

Chemist and Druggist, 1877 and 1879. Sawyer, 61 Cheapside.

Three 49 oz. syrup bottles, opaque white glass. Wright, Chemist, Burnley.

Codd's patent bottles; any quantity bought under 50 gross; full size. Ettles, Elgin.

Five cwt. platform weighing machine; must be accurate and equal to new. Particulars, Furnival, Chemist, Hanley, Potteries.

Human skull (adult) with teeth; also two arm or leg bones; good condition; must be cheap. Ginn, Rothwell, Kettering.

Cistern for storage of paraffin, size about 49 gallons; also pessary-mould for 12. Particulars to C. L. M., 13 Whitefriargate, Hull.

Fowne's "Chemistry," 12th edition, Attfield's "Chemistry," 7th edition. Williams, Longfield, Pool.

Year-books of Pharmacy, from commencement to 1876. Newsholme, Pharmaceutical Chemist, Sheffield.

Copying apparatus.—Recipe for composition and ink, 1c. Wittstien, Lower Broughton, Manchester.

Good galls, gum siftings, ground myrobolans, cheap. J. W. Adams, 110 Robert Hall Street, Salford.

Major Student.—Chemical apparatus, cash, or exchange cart, nectandrea, books, &c. Mason, Penge Pharmacy, Penge.

No. 9 Wedgwood mortar, also mixing machine, suitable for 14 to 28 lbs. baking powder, &c. Marl, Halstead.

To purchase the entire fittings of a small chemist's shop. Send list of contents and price, which must be low, to E. Miller, 39 St Paul's Square, Preston.

Five or six 6-gallon window-carboys, pear-shaped preferred. For exchange or sale 6 2-gallon. W. R. T., 19 Cleveland Terrace, Middlesborough.

To exchange for reading for the *Dental Cosmos*, *Chemist and Druggist*, *Pharmaceutical Journal*, *British Journal of Dental Science* any other medical or scientific journal. 115/6.

Ten oz. and 4 or 5 oz. shop bottles, new or second hand, wide and narrow mouthed, labelled or not, must be cheap; also some extract pots, 4, 6, or 8 oz.; and Gray's "Supplement," last edition. E. Miller, 39 St. Paul's Square, Preston.

Babington's "Manual of British Botany," pocket edition (or Hooker's); Sowerby's "Illustrated Key to the Natural Orders of British Wild Flowers," Lindley's "School Botany"; all to be in good condition. Lowest cash price to F. Gall, Carshalton, Surrey.



THERE seems every reason to hope that the improvement in business which has been made apparent for some time past, and which so many commercial men have been slow to believe in, is really solid and extending. The official returns for January are especially encouraging. They still show, of course, a considerable increase in our imports of food, but they also show generally an increase in the imports of raw materials for our manufactures, and an advance of nearly 20 per cent. in our exports all round as compared with those of January, 1879. The value of our exports in January, 1879, had declined to 14,196,518*l.*; last month they had improved to 16,912,858*l.* In most quarters, too, the prospects of trade are spoken of more hopefully, and as the restoration of confidence is one of the chief factors upon which the improvement depends, this feeling is itself an item of promise as to the prospects for 1880.

Chemicals have shared in a marked degree in the general improvement. The subjoined figures will show how the export of these is on the increase:—

	January, 1879		January, 1880	
	Tons	Value £	Tons	Value £
Exports of alkali ..	461,912	143,218	501,003	180,210
Chemical products (un- enumerated) ..	—	125,063	—	176,216

In almost all chemical products there is a tendency upwards in price, in some instances to an almost exaggerated extent. Both home and foreign demands for heavy chemicals are strong, the trade with America being especially good. Bleaching powder has been in continual demand, until the London price is now quoted 9*l.* per ton. Soda crystals are now 87*s.* 6*d.* per ton, and bicarb. is firm at 12*l.* 10*s.* to 12*l.* 15*s.*, an advance of 30*s.* since last month. Makers show considerable reluctance to make future contracts, and little can be done in this way except at still higher rates. Cream of tartar is getting a good deal dearer, and it is quite possible that it may reach very much higher figures still. The production of wine in 1879, on which the supply of argols depends, is said to be very small, general estimates placing it at not much more than half that of the previous year, which itself was hardly up to the average. It is probable that there had been a good stock of argols in hand, but it is not likely that there was anything like enough to compensate for the insufficiency of the new stock. Tartaric acid, which depends on cream of tartar, is also advancing and firm, and citric is up to 2*s.* 5*d.*, in consequence of an advance in the price of lemon juice coinciding with the moment when everybody wants to make his contracts for the spring. Potash and ammonia salts are unchanged. Saltpetre has advanced 1*s.* 6*d.* per cwt. during the month, British refined now selling at 27*s.* 6*d.* to 29*s.* Borax has rapidly advanced during the past fortnight, and is now 50*s.* for English refined. This is due to a limitation of the production in California. Powdered arsenic is higher at 11*s.* 3*d.* to 11*s.* 6*d.*, and alum is also somewhat firmer at 7*l.* for lump, and 7*l.* 15*s.* per ton for ground. Quicksilver fluctuates between 7*l.* and 7*l.* 10*s.* per bottle. The following calculation will show the position of this metal:—At the end of 1877 the estimated stock in the world was about 80,000 flasks. Add to this the Californian product for two years, 136,000 flasks; the Spanish production, 80,000 flasks; and that of Austria, 20,000 flasks; and we have 316,000 flasks to be accounted for. It is estimated that the stock at the end of 1879 was not more than 50,000 flasks. This shows an annual consumption of 133,000 flasks, which is very much greater than it was supposed to be, and which, if maintained, will give frequent opportunity for a sudden advance in price. Iodine is still firm at 1*s.* 2*d.*; bromides are dull.

Prices of drugs are well maintained, and fair quantities have been bought, but the tone of the market is not active.

Barks are in quiet demand for South American kinds, but have been very firm for Ceylon and E. I. parcels, especially for the finest qualities. The last harvest of E. I. barks is believed to have been over-estimated, and this has given an impetus to the price.

At the latest sales on Tuesday last prices were fully maintained for fine E. I. cinchona, and an occasional advance was established. Some fine Neighery moss-renewed realised 9*s.* 10*d.* and 9*s.* 11*d.* South American kinds were not in much demand, but holders declined to accept any reduction and a good part of the stock was withdrawn. Quinine remains firm at last month's prices.

A renewal of firmness has been apparent in the opium market, owing to reports of higher prices having been paid in Smyrna, and to the smallness of the stock here. Rumours of injury to the coming crop have already commenced.

Balsam of copaiba is still kept up to its high rates. A good deal of firm holding of this drug is reported from America, where yet higher prices are anticipated.

Camphor has arrived in great abundance, and the price here has fractionally given way for crude, some forced sales having occurred, but it is asserted with confidence that present holders have squared the sources of supply, and that they will maintain prices.

Castor oil has become very flat, and has declined to the extent of 3*d.* per lb. Cod liver oil is higher, pale Norwegian Cape having sold for 5*s.* 6*d.* at last sales. Aloes are still declining. Cubebs are held firmly, and 90*s.* is the price now asked for them. Honey is still selling at high prices. Aniseed and the oil are quoted lower. Rhubarb is dull of sale, and jalap has relapsed a trifle further. Saffron has been forced up by continental houses, but without much response here, and it is doubtful whether there is really much cause for the advance. A heavy and continuous decline has occurred in shellac.

OILS.—Linseed is steady at 27*l.* for spot and 10*s.* to 15*s.* dearer for forward purchases. Rape has declined, but has since recovered during the month, closing at rather less than last month's quotations. Olive has not been largely dealt in. The tendency is towards a decline, as the reports of the coming crop in Italy are very favourable, and holders are, therefore, anxious to dispose of their present possessions. Coconut is 1*l.* 10*s.* lower, at 35*l.* to 37*l.*, and cottonseed has declined 1*l.* per tun, being now 28*l.* to 29*l.* Turpentine has lost some of its recent advance, and may now be bought at 32*s.* 6*d.*, which is a recovery from recent prices. Petroleum has fallen still lower, and though a fractional recovery has occurred within the past week, it still lingers at a fraction over or below 6*d.*

	1870	1879		1880	1879
Aloes	1,363	2,379	Gum (cont'—		
"	11	11	Galbanum pkgs	12	19
"	594	302	Gamboge..	189	186
Aniseed, Star cchts	461	616	Guaiaacum..	57	10
Atrowroot	10,098	12,847	Kino	38	11
" bxs & tins	13,868	6,246	Kowie	452	928
Balsam	26	66	Mastic	117	165
Bark, Medicinal			Myrrh, E.I.	125	115
cks, &c.	751	565	Olibanum..	1,655	1,549
" srns, &c.	17,586	11,985	Sandarac..	344	1,205
Borax	484	1,160	Senegal.....	16	17
Bees' Wax			Tragacanth pkgs	2,164	1,554
srns	1,053	917	Ipeacac. cks & bgs	172	246
" cks & cs	2,727	1,820	Jalap	281	450
" cakes	6	27	Nox Vomica pkgs	922	4,602
Wax, Jap. veg. pkgs	3,039	4,967	Oil—		
Camphor	3,953	1,139	Castor	126	3
Carlamoms	331	209	"	14,226	5,140
Cocc. Ind. bgs, &c.	1,275	1,635	Palm	217	1,105
Colombo root pkgs	411	738	Coconut	4,745	1,959
Cream Tartar..	113	93	Olive	1,564	472
Cubebs	98	167	Aniseed	136	69
Dragonsblood cchts	81	109	Cassia	316	231
Galls, E.I. cks & cs	1,267	4,101	Opium	1,258	1,199
M'terranean sks	512	841	Rheubarb.....	1,248	1,266
Gum—			Sarsaparilla	555	908
Ammoniac pkgs	413	469	Senna	1,519	1,742
Animi & Coraj			Shellac—		
" pkgs	2,325	5,218	Orange. cchts, &c.	21,715	27,266
"			Garnet..	11,799	10,046
Arabic, Barbary	1,837	1,182	Button..	1,983	4,074
"			Gambur.....	2,233	3,273
Turkey ..	3,469	338	Catch	945	3,026
E.I.	1,779	1,606	Tortoiseshell, cs, &c.	275	956
Assafetida pkgs	515	276	Turmeric	2,748	2,120
Benjamin..	1,280	1,173	Vermilion	106	29
Damar....	1,248	1,358			

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.	1880.		1879.	
	s. d.	s. d.	s. d.	s. d.
ACIDS—				
Acetic	0 2½ to	0 3½	0 2½ to	0 0
pur	0 4 ..	0 7	0 0 ..	0 0
glaciale ..	0 9½ ..	0 10	0 0 ..	0 0
Benzoic Sublimate ..	7 6 ..	0 0	0 0 ..	0 0
Citric	2 4½ ..	0 0	2 0 ..	0 0
Gallic	3 6 ..	3 10	0 0 ..	0 0
Hydrochlor. per cwt.	5 0 ..	7 0	4 0 ..	7 0
Nitric	0 4 ..	0 0	0 4½ ..	0 0
Oxalic	0 5 ..	0 5½	0 4½ ..	0 4½
Sulphuric	45 0 ..	0 0	0 0 ..	0 0
Salicylic	8 0 ..	8 6	0 0 ..	0 0
Tannic	1 8 ..	2 8	0 0 ..	0 0
Tartaric crystal. ..	1 7 ..	1 7½	1 4½ ..	1 4½
powdered ..	1 7 ..	1 7½	1 4½ ..	1 4½
ANTIMONY ore	0 0 ..	0 0	240 0 ..	330 0
crude .. per cwt.	0 0 ..	0 0	32 6 ..	0 0
star	0 0 ..	0 0	49 0 ..	51 0
ARSENIC , lump	23 6 ..	0 0	25 0 ..	0 0
powder.	11 0 ..	11 6	9 0 ..	10 0
BRIMSTONE , rough .. per ton	110 0 ..	0 0	100 0 ..	102 6
roll .. per cwt.	9 6 ..	10 9	9 6 ..	10 3
flour	10 6 ..	12 6	10 6 ..	13 0
GLYCERINE , German ..	46 0 ..	60 0	0 0 ..	0 0
refined	28 0 ..	30 0	0 0 ..	0 0
crude brown	1 2 ..	0 0	1 1 ..	0 0
IODINE , dry	1 10 ..	0 0	1 10 ..	0 0
MAGNESIA , calcined, per lb.	145 0 ..	0 0	125 0 ..	0 0
MERCURY	21 3 ..	0 0	16 9 ..	17 0
MINIUM , red	59 0 ..	3) 0	28 6 ..	0 0
orange	3 2 ..	0 0	3 3 ..	0 0
PRECIPITATE , red .. per lb.	3 1 ..	0 0	3 2 ..	0 0
white	0 0 ..	0 0	0 0 ..	0 0
PRUSSIAN BLUE ..	25 0 ..	27 0	0 0 ..	0 0
SANTONINE	16 0 ..	0 0	0 0 ..	0 0
SALICINE	26 0 ..	27 0	0 0 ..	0 0
THYMOL				
SALTS—				
Alum	135 0 ..	140 0	120 0 ..	122 6
powder	155 0 ..	0 0	140 0 ..	0 0
Ammonia:				
Carbonate	0 6½ ..	0 6½	0 6½ ..	0 6½
Hydrochlorate, crude,				
white	600 0 ..	800 0	600 0 ..	720 0
British (see Sal Am.) ..				
Sulphate	400 0 ..	0 0	375 0 ..	38) 0
Argol , Cape	77 0 ..	86 0	75 0 ..	82 0
Red	50 0 ..	75 0	52 0 ..	70 0
Oporto, red.	35 0 ..	36 0	32 0 ..	33 0
Sicily	0 0 ..	0 0	6) 0 ..	65 0
Ashes (see Potash and Soda)				
Bleaching powd. per cwt.	9 0 ..	0 0	5 9 ..	0 0
Borax, British refined.	50 0 ..	0 0	35 6 ..	36 6
Calomel	2 11 ..	0 0	2 10 ..	0 0
Chloral hydrate ..	4 2 ..	4 4	0 0 ..	0 0
Liebreich's ..	5 10 ..	6 0	0 0 ..	0 0
Copper:				
Sulphate	21 0 ..	21 6	18 3 ..	18 6
Copperas, green. per cwt.	50 0 ..	55 0	50 0 ..	55 0
Corrosive Sublimate p. lb.	2 5 ..	0 0	2 3 ..	0 0
Cr. Tartar, French, p. cwt.	122 0 ..	0 0	100 6 ..	101 0
brown	92 6 ..	93 6	89 0 ..	82 6
Epsom Salts	4 3 ..	6 0	4 3 ..	6 0
Glauber Salts	3 0 ..	4 6	3 0 ..	4 6
Magnesia: Carbonate ..	42 6 ..	0 0	47 6 ..	0 0
Morphia Murias ..	8 0 ..	0 0	0 0 ..	0 0
Potash:				
Bichromate	0 6½ ..	0	0 4½ ..	0 5
Carbonate:				
Potashes, Canada, 1st				
sort	27 0 ..	27	25 6 ..	0 0
Pearlshades, Canada, 1st				
sort	34 0 ..	0	36 0 ..	0 0
Chlorate	0 7½ ..	0 0	0 6 ..	0 6½
Prussiate	0 11½ ..	0 11½	0 11½ ..	0 11½
rod	1 8 ..	1 10½	1 7½ ..	1 8
Tartrate (see Argol and Cream of Tartar)				
Potassium:				
Bromide	1 11 ..	2 0	1 8 ..	0 0
Chloride	0 0 ..	0 0	6 6 ..	0 0
Iodide	18 0 ..	18 6	16 0 ..	16 6
Quinine:				
Sulphate, British, in				
bottles	12 0 ..	0 0	11 3 ..	0 0
Sulphate, French ..	12 0 ..	12 3	11 6 ..	11 9
Sulphate, German ..	11 0 ..	11 3	0 0 ..	0 0
Sol Acetos	0 7 ..	0 7½	0 6½ ..	0 7
Sal Ammoniac, Brit. cwt.	44 0 ..	45 0	44 0 ..	45 0

	1880.		1879.	
	s. d.	s. d.	s. d.	s. d.
Sulphate:				
Bengal, 6 per cent. or				
under	23 9 to	24 3	18 6 to	19 3
Bengal, over 6 per cent.				
per cwt.	22 9 ..	23 6	17 6 ..	18 3
British, refined ..	27 6 ..	29 0	23 6 ..	23 0
Soda: Bicarbonate ..	12 6 ..	12 9	8 9 ..	9 0
Carbonate:				
Soda Ash .. per deg.	0 2½ ..	0 0	0 1½ ..	0 0
Soda Crystals per ton	87 6 ..	0 0	62 6 ..	65 0
Caustic	0 0 ..	0 0	9 9 ..	10 3
Hypsulphite, per cwt.	0 0 ..	0 0	0 0 ..	0 0
Nitrate	19 0 ..	19 2	13 0 ..	0 0
Zinc Sulphate ..	0 0 ..	0 0	16 6 ..	0 0
SUGAR OF LEAD , Whitecwt.	49 0 ..	0 0	38 0 ..	0 0
Brown, cwt.	26 6 ..	0 0	26 6 ..	0 0
VERDIGRIS	0 0 ..	0 0	1 1 ..	1 5
VERMILION , English ..	2 8 ..	0 0	2 3 ..	0 0
China	2 3 ..	0 0	2 3 ..	0 0
DRUGS.				
ALOE s, Hepatic	60 0 ..	15) 0	65 0 ..	170 0
Socotrine	46 0 ..	19) 0	80 0 ..	210 0
Cape, good ..	37 0 ..	38 0	35 0 ..	38 0
Inferior	34 0 ..	36 0	33 0 ..	35 0
Burdaboes ..	4) 0 ..	2) 5 0	4) 0 ..	170 0
AMBEGRIS , grey	55 0 ..	85 0	57 0 ..	80 0
BALSAM—				
Canada	0 0 ..	0 0	0 8 ..	0 8½
Capivi	2 3 ..	3 0	1 3 ..	1 10
Peru	7 3 ..	7 5	4 8 ..	4 9
Tolu	3 2 ..	3 4	2 8 ..	2 10
BARKS—				
Canela alba	12 0 ..	18 0	24 0 ..	30 0
Cascarilla	18 0 ..	24 0	24 0 ..	33 0
CINCHONA—				
Calisaya, good and fine per lb.	5 6 ..	7 0	4 6 ..	6 6
medium	3 9 ..	5 0	3 6 ..	5 0
N. Grand., fair to fine ..	6 6 ..	7 0	0 0 ..	0 0
ord. to mid.	3 0 ..	6 0	0 0 ..	0 0
Columbian, fine	3 6 ..	4 6	4 0 ..	6 4
ord. to fair ..	1 6 ..	3 0	1 6 ..	3 6
Carthageni, fair	2 9 ..	3 3	2 8 ..	4 6
good medium ..	2 0 ..	2 8	2 2 ..	2 6
E. I. mossed	7 6 ..	9 11	0 0 ..	0 0
Ceylon, crown	3 6 ..	7 2	4 0 ..	7 0
rel	1 9 ..	3 0	0 0 ..	0 0
twigs and chips ..	0 8½ ..	1 0	1 0 ..	2 2
Darjeeling, rel	2 6 ..	3 3	3 0 ..	3 9
BUCHU LEAVES	0 3 ..	1 4	0 2 ..	1 0
CAMPHOR , China .. per cwt.	102 6 ..	0 0	78 0 ..	8) 0
Japan	112 6 ..	0 0	0 0 ..	0 0
Refin. Eng. per lb.	1 6 ..	0 0	1 2 ..	0 0
CANTHARIDES	1 10 ..	4 3	1 6 ..	4 3
CHAMOMILE FLOWERS p. cwt.	49 0 ..	99 0	40 0 ..	80 0
CASTOREUM	12 0 ..	26 0	0 0 ..	0 0
DRAGON'S BLOOD , p. cwt.	100 0 ..	240 0	10) 0 ..	20) 0
FRUITS AND SEEDS (see also Seeds and Spices).				
Anise, China Star per cwt.	87 0 ..	0 0	75 0 ..	77 6
Spanish, &c.	33 0 ..	49 0	26 0 ..	32 0
Beans, Tonquin .. per lb.	3 6 ..	4 6	4 0 ..	6 0
Cardamoms , Malabar ..				
good	8 0 ..	9 6	6 0 ..	7 0
inferior	3 9 ..	7 6	2 0 ..	5 10
Aleppy	3 6 ..	8 3	2 0 ..	6 8
Madras	1 6 ..	6 0	2 8 ..	4 6
Ceylon	2 6 ..	5 6	2 7 ..	4 2
Cassia Fistula	25 0 ..	35 0	55 0 ..	57 0
Cocculus Indicus ..	8 6 ..	9 0	7 3 ..	9 0
Crotoncherry , apple .. per lb.	0 11 ..	1 8	1 0 ..	1 19
Croton Seeds	50 0 ..	52 6	23 0 ..	33 0
Cubeb s	8) 6 ..	9) 0	0 0 ..	0 0
Cammin	39 0 ..	41 0	38 0 ..	5) 0
Fenugreek	9 0 ..	13 0	6 0 ..	8 0
Guinea Grains ..	35 0 ..	33 0	3) 0 ..	0 0
Juniper Berries ..	0 0 ..	0 0	3 6 ..	6 0
Nux Vomica	8 0 ..	10 0	7 0 ..	10 0
Tamarinds, East India, ..	11 0 ..	16 0	12 0 ..	19 0
West India	11 0 ..	21 0	23 0 ..	28 0
Vanilla, large .. per lb.	25 0 ..	39 0	19 0 ..	25 0
inferior	10 6 ..	21 6	18 0 ..	18 6
GINGER , Preservol ..	0 6½ ..	0 7½	0 5½ ..	0 6
HONEY , Chili .. per cwt.	6) 0 ..	6) 0	30 0 ..	35 0
Jamaica	35 0 ..	55 0	35 0 ..	41 0
IPECACUANHA	4 9 ..	5 3	4 4 ..	5 0
ISINGLASS , Brazil ..	2 7 ..	5 2	2 6 ..	5 3
Tongue sort ..	2 9 ..	5 4	3 6 ..	5 5
East India ..	1 0 ..	4 10	1 3 ..	4 10
West India ..	3 0 ..	4 10	3 7 ..	4 9
Russ, long staple ..	6 0 ..	10 6	6 0 ..	10 6
inferior	0 0 ..	0 0	0 0 ..	0 0
Simovia	2 0 ..	2 6	1 6 ..	2 6
JALAP , good	1 0 ..	1 3	0 11 ..	1 1
infer. & stems ..	0 10 ..	0 11	0 9½ ..	0 10½
LEMON JUICE .. per degree	0 0½ ..	0 1½	0 0½ ..	0 1½
LIME JUICE	1 2 ..	1 6	1 3 ..	1 8
LIQUORICE , Spanish per cwt.	3) 0 ..	36 0	0 0 ..	0 0
Liquorice Root ..	2) 0 ..	3) 0	0 0 ..	0 0
MANNA , fluky	0 0 ..	0 0	3 6 ..	4 0
MCSK , Pod	16 0 ..	60 0	13 0 ..	57 0
Grain	30 0 ..	68 0	47 0 ..	55 0
OILS (see also separate list)				
Almond, expressed per lb.	2 0 ..	0 0	2 0 ..	0 0
Castor, 1st pale	0 4 ..	0 5	0 4½ ..	0 5½
second	0 4 ..	0 4½	0 4½ ..	0 4½
Cod Liver	3 6 ..	5 6	2 6 ..	4 6
Croton	0 0 ..	0 0	0 2½ ..	0 0

	1880.		1879.	
	s. d.	s. d.	s. d.	s. d.
Essential Oils:				
Almond.....per lb.	36 0	to 0 0	20 0	to 0 0
Anise-seed....."	8 0	.. 8 3	7 0	.. 0 0
Bergamot....."	8 0	.. 10 0	0 0	.. 0 0
Cajeput.....per bottle	4 0	.. 5 4	3 6	.. 4 0
Caraway....."	7 0	.. 7 6	0 0	.. 0 0
Cassia.....per lb.	4 0	.. 5 0	2 10	.. 3 0
Cinnamon.....per oz.	2 0	.. 4 0	4 0	.. 5 0
Cinnamon-leaf....."	0 1½	.. 0 1½	0 1½	.. 0 0
Citronelle....."	0 5	.. 0 0	0 3	.. 0 0
Clove....."	8 6	.. 9 0	9 0	.. 0 0
Ginger Grass....."	0 3½	.. 0 0	0 2½	.. 0 3
Lavender Exot.....per lb.	1 4	.. 7 3	1 8	.. 7 0
Mitebam....."	110 0	.. 0 0	0 0	.. 0 0
Lemon....."	3 0	.. 5 6	4 6	.. 6 0
Lemongrass.....per oz.	0 4	.. 0 0	0 2½	.. 0 3
Neroli....."	0 0	.. 0 0	3 0	.. 6 6
Nutmeg....."	0 7½	.. 0 0	0 3	.. 0 4
Orange.....per lb.	0 0	.. 0 0	5 0	.. 7 0
Otto of Roses.....per oz.	15 0	.. 23 0	18 0	.. 20 0
Patchouli....."	0 0	.. 0 0	1 6	.. 3 0
Peppermint:				
American.....per lb.	13 0	.. 15 0	8 0	.. 12 0
(H. G. Hotchkiss),	15 6	.. 0 0	0 0	.. 0 0
English....."	39 0	.. 0 0	21 0	.. 23 0
Japan....."	10 0	.. 13 0	0 0	.. 0 0
Rosemary....."	1 3	.. 2 5	2 0	.. 2 6
Sassafras....."	2 10	.. 3 0	2 0	.. 2 3
Spearmint....."	13 0	.. 0 0	8 0	.. 9 0
Thyme....."	1 6	.. 4 2	0 0	.. 0 0
Mace, expressed.....per oz.	0 0	.. 0 0	0 6	.. 0 7
OPIUM, Turkey.....per lb.	16 0	.. 17 6	15 0	.. 17 0
inferior....."	13 0	.. 15 6	13 0	.. 14 6
QUASSIA (bitter wood) per ton	0 0	.. 0 0	100 0	.. 130 0
RHUBARB, China, good and fine.....per lb.	2 6	.. 4 0	1 9	.. 3 6
Mid, to ord....."	0 8	.. 1 8	0 9	.. 1 6
Dutch Trimmed....."	0 0	.. 0 0	0 0	.. 0 0
ROOTS—Calumba.....per cwt.	40 0	.. 56 0	30 0	.. 50 0
China....."	28 0	.. 30 0	20 0	.. 27 0
Chiretta.....per lb.	0 2½	.. 0 4	0 0	.. 0 0
Galangal.....per cwt.	21 0	.. 22 0	18 0	.. 20 0
Gentian....."	16 0	.. 20 0	18 0	.. 20 0
Orris....."	16 0	.. 26 0	20 0	.. 45 0
Pellitory....."	0 0	.. 0 0	70 0	.. 76 0
Pink.....per lb.	0 8	.. 1 3	0 0	.. 0 0
Rhatany....."	0 5	.. 0 6	0 2	.. 0 5
Seneca....."	2 11	.. 3 6	2 8	.. 2 9
Snake....."	0 0	.. 0 0	0 10	.. 0 0
SAFFRON, Spanish....."	35 0	.. 46 0	20 0	.. 40 0
SALEP.....per cwt.	120 0	.. 160 0	120 0	.. 150 0
SARSAPARILLA, Lima per lb.	0 5	.. 0 6	0 4	.. 0 5
Guayaquil....."	1 3	.. 1 5	1 1	.. 1 5
Honduras....."	1 2	.. 1 10	1 0	.. 1 4
Jamaica....."	1 3	.. 1 10	1 2	.. 1 7
SASSAFRAS.....per cwt.	3 0	.. 3 9	0 0	.. 0 0
SCAMMONY, Virgin.....per lb.	30 0	.. 36 0	0 0	.. 0 0
second & ordinary....."	10 0	.. 25 0	0 0	.. 0 0
SENNA, Bombay....."	0 0	.. 0 0	0 0	.. 0 0
Tinnivelly....."	0 3	.. 0 10½	0 1½	.. 1 3
Alexandria....."	0 3	.. 1 3	0 4	.. 1 6
SPEARMINT, refined	1 3	.. 0 0	1 1	.. 0 0
American....."	1 1½	.. 0 0	0 1	.. 0 3
SQUILLS....."	0 1	.. 0 2½	0 1	.. 0 3
GUMS.	£ s.	£ s.	£ s.	£ s.
AMMONIAC drop.....per cwt.	1 12	.. 2 0	2 0	.. 2 2
ANIMI, fine washed....."	19 0	.. 23 0	13 16	.. 15 0
sorts....."	13 0	.. 16 15	9 0	.. 12 0
ARABIC, black picked....."	3 0	.. 3 10	2 15	.. 3 5
sorts, md. to fir....."	2 0	.. 2 18	2 2	.. 2 14
TURKEY, pick. gd. to fin....."	7 0	.. 10 0	5 10	.. 8 0
second & inf. sorts....."	3 10	.. 5 10	3 5	.. 5 5
selected....."	2 10	.. 3 2/6	2 5	.. 2 10
ASSAFETIDA, cm. to fin....."	0 12	.. 3 12	1 8	.. 3 0
BENJAMIN, 1st & 2nd....."	15 0	.. 45 0	21 0	.. 70 0
COPAL, Sierra Leone, per lb.	0 0	.. 0 0	0 7½	.. 0 10
Manilla.....per cwt.	38 0	.. 65 0	16 0	.. 25 6
DAMMAR, pale....."	100 0	.. 117 6	72 6	.. 0 0
EUPHORBUM....."	0 0	.. 0 0	9 10	.. 15 0
GALBANUM.....per lb.	0 6	.. 1 2	0 0	.. 0 0
GAMBOGE, pckd. pipe per cwt.	300 0	.. 400 0	267 6	.. 275 0
GUAIACUM.....per lb.	0 8	.. 2 1	0 6	.. 1 6
KINO.....per cwt.	60 0	.. 100 0	65 0	.. 99 0
KOWRIE, sorts....."	50 0	.. 80 0	20 0	.. 45 0
selected....."	125 0	.. 2 0	122 6	.. 172 6
MASTIC, picked.....per lb.	3 6	.. 4 6	3 0	.. 3 6
MYRRH, gd. & fine per cwt.	180 0	.. 210 0	150 0	.. 170 0
ord. to fair....."	100 0	.. 175 0	65 0	.. 142 0
CHAPANUM, p. drop....."	72 0	.. 73 0	59 0	.. 66 0
amber & ylw....."	48 0	.. 71 0	40 0	.. 53 0
SENEGAL....."	57 6	.. 60 0	0 0	.. 0 0
SANDARAC....."	70 0	.. 110 0	60 0	.. 110 0
SHELLAC, Orange....."	150 0	.. 175 0	73 0	.. 87 0
Liver....."	145 0	.. 170 0	67 0	.. 73 0
THUS....."	0 0	.. 0 0	20 0	.. 21 6
TRAGACANTH, leaf....."	200 0	.. 260 0	220 0	.. 370 0
in sorts....."	40 0	.. 180 0	65 0	.. 180 0
OILS.	£ s.	£ s.	£ s.	£ s.
SEAL, pale.....per tun	10 0	.. 0 0	28 0	.. 0 0
yellow to tinged....."	27 0	.. 29 10	25 0	.. 27 0
brown....."	25 0	.. 0 0	24 0	.. 0 0
SPERM....."	71 0	.. 72 0	60 0	.. 0 0

	1880.		1879.	
	£ s.	£ s.	£ s.	£ s.
Oils, continued:—				
BODY.....per tun	0 0	.. 0 0	0 0	.. 0 0
CON....."	27 0	.. 27 10	26 10	.. 28 5
WHALE, South Sea, pale....."	26 0	.. 0 0	27 0	.. 0 0
yellow....."	25 0	.. 0 0	26 0	.. 0 0
brown....."	20 0	.. 21 0	23 0	.. 24 0
East India, Fish....."	0 0	.. 0 0	0 0	.. 0 0
OLIVE, Galipoli.....per ton	0 0	.. 0 0	0 0	.. 0 0
Gioja....."	46 0	.. 0 0	0 0	.. 0 0
Levant....."	45 0	.. 0 0	43 0	.. 43 10
Mogador....."	0 0	.. 0 0	0 0	.. 0 0
Spanish....."	45 10	.. 47 10	45 0	.. 46 0
Sicily....."	45 10	.. 0 10	0 0	.. 0 0
COCOANUT, Coch., Ceylon, Mauritius....."	37 0	.. 39 0	37 0	.. 39 0
Ceylon....."	34 10	.. 35 0	33 10	.. 35 0
Mauritius....."	36 0	.. 0 0	39 0	.. 0 0
GROUND NUT AND GINGELLY:				
Bombay....."	0 0	.. 0 0	0 0	.. 0 0
Madras....."	0 0	.. 0 0	0 0	.. 0 0
PALM, fine....."	35 0	.. 0 0	36 0	.. 0 0
LINSEED....."	27 0	.. 0 0	25 0	.. 24 10
RAPESEED, English, pale....."	30 15	.. 0 0	31 15	.. 32 0
brown....."	23 15	.. 30 0	29 15	.. 30 0
Foreign, pale....."	0 0	.. 0 0	0 0	.. 0 0
brown....."	0 0	.. 0 0	0 0	.. 0 5
COTTONSEED....."	28 0	.. 29 0	27 10	.. 0 0
LARD....."	42 0	.. 44 0	38 0	.. 0 0
TALLOW....."	0 0	.. 0 0	31 0	.. 35 0
TURPENTINE, American, cks., French....."	32 6	.. 0 0	21 9	.. 0 0
PETROLEUM, Crude....."	0 0	.. 0 0	0 0	.. 0 0
refined, per gall....."	0 5½	.. 0 6½	0 8½	.. 0 0
Spirit....."	0 7½	.. 0 0	1 0	.. 1 2
SEEDS.				
CANARY.....per qr.	58 6	.. 70 0	46 0	.. 56 0
CARAWAY, English per cwt.	0 0	.. 0 0	0 0	.. 0 0
German, &c....."	27 0	.. 33 0	0 0	.. 0 0
CORIANDER.....per qr.	16 0	.. 12 6	15 0	.. 20 0
HEMP.....per qr.	30 0	.. 40 0	39 0	.. 44 0
LINSEED, English....."	60 0	.. 68 0	60 0	.. 68 0
Black Sea & Azof....."	54 6	.. 55 0	48 6	.. 49 0
Calcutta....."	56 0	.. 0 0	48 0	.. 49 0
Bombay....."	57 0	.. 0 0	49 6	.. 0 0
St. Petersburg....."	53 0	.. 54 0	48 0	.. 0 0
Mustard, brown.....per bushel.	12 0	.. 16 0	0 0	.. 0 0
white....."	5 0	.. 10 0	9 0	.. 12 6
POPPY, East India, per qr.	51 0	.. 52 0	50 6	.. 0 0
SPICES.				
CASSIA LIGNEA.....per cwt.	46 0	.. 55 0	39 0	.. 50 0
Verra....."	30 0	.. 42 0	22 0	.. 36 0
Buds....."	61 6	.. 0 0	53 0	.. 54 0
CINNAMON, Ceylon:				
1st quality.....per lb.	1 6	.. 3 5	1 4	.. 3 3
2nd do....."	1 4	.. 2 2	1 2	.. 2 4
3rd do....."	1 3	.. 1 9	1 1	.. 1 8
Tellicherry....."	0 0	.. 0 0	1 6	.. 2 4
Chips....."	0 4	.. 0 6½	0 3	.. 0 5
CLOVES, Penang....."	1 3	.. 1 11	1 7½	.. 1 9
Ambonya....."	1 4	.. 1 6	1 4	.. 1 6
Zanzibar....."	1 2	.. 0 0	1 4	.. 1 5
GINGER, Jam., fine per cwt.	110 0	.. 200 0	90 0	.. 203 0
Ord. to good....."	60 0	.. 165 0	50 0	.. 89 0
African....."	22 0	.. 23 0	21 0	.. 22 0
Bengal....."	20 0	.. 21 0	16 6	.. 18 6
Malabar....."	0 0	.. 0 0	0 0	.. 0 0
Cochin....."	28 0	.. 110 0	46 0	.. 125 0
PEPPER, Blk, Malabar, per lb.	0 4½	.. 0 4½	0 4	.. 0 4½
Singapore....."	0 4½	.. 0 4½	0 3½	.. 0 3½
White Tellicherry....."	0 0	.. 0 0	0 10	.. 1 4
Cayenne....."	0 8	.. 2 0	1 4	.. 3 1
MACE, 1st quality....."	1 7	.. 3 0	1 8	.. 2 6
2nd and inter. or....."	1 2	.. 1 6	1 0	.. 1 7
NUTMEGS, 78 to 60 to lb.	3 11	.. 4 9	3 5	.. 4 0
90 to 80....."	3 2	.. 3 10	2 4	.. 3 4
132 to 95....."	2 4	.. 3 1	1 10	.. 2 10
PIMENTA....."	0 4½	.. 0 4½	0 5	.. 0 10
VARIOUS PRODUCTS.				
COCHINEAL—				
Honduras, black.....per lb.	0 0	.. 0 0	2 0	.. 2 5
silver....."	0 0	.. 0 0	2 0	.. 2 3
Mexican, black....."	3 1	.. 3 2	2 1	.. 2 2
silver....."	3 0	.. 3 1	2 1	.. 0 0
Teneriffe, black....."	3 1	.. 3 8	2 1	.. 2 11
silver....."	3 0	.. 3 2	2 1	.. 2 0
SOAP, Castile.....per cwt.	30 0	.. 0 0	33 0	.. 34 10
SOY, China.....per gall.	2 10	.. 3 0	2 1	.. 2 2
TERRA JAPONICA—				
Gambier.....per cwt.	18 9	.. 19 6	17 6	.. 0 0
Free cubes....."	21 0	.. 21 0	18 0	.. 23 0
Cutch....."	33 0	.. 41 0	21 0	.. 24 0
WAX, BEES, English....."	40 0	.. 40 0	40 0	.. 0 0
Jamaica....."	6 0	.. 7 0	7 0	.. 7 10
East India....."	5 0	.. 6 0	6 0	.. 6 10
VEGETABLE, Japan....."	4 0	.. 4 5	2 6	.. 3 0
WOOD, DYE, Bar.....per ton	5 0	.. 5 2/6	3 10	.. 3 15
Brazil....."	12 0	.. 45 0	0 0	.. 0 0
Cam....."	13 0	.. 26 0	18 0	.. 28 0
Fustic, Cuba....."	0 0	.. 0 0	8 0	.. 8 1



Correction.—In our last number, under the title "Poisoning by Aconite Root" (page 24), we quoted from "an excellent paper by Professor Redwood," published in 1853. The author of the paper referred to was Professor Bentley, not Professor Redwood.

88/20. **Cod-liver Oil Emulsion.**—*J. E. S.*—"Could you oblige by sending me a good recipe for making cod-liver oil emulsion?" See *THE CHEMIST AND DRUGGIST*, 1874, p. 139 (ferruginous syrup and emulsion); p. 332 (emulsion); 1875, p. 436 (emulsion with calcium hypophosphite); 1877, p. 376 (permanent emulsion "used for several years"). L. von Cotzhausen communicated a paper on emulsions to the *American Journal of Pharmacy*, June, 1878, p. 284. The following selections from his results refer to cod-liver oil:—Oil, 4 drachms; gum arabic, 4 drachms; water, 3 or 4 drachms; the oil and water poured on the gum in a mortar, triturated well for some minutes, and diluted with water to 5 oz., formed a good emulsion, which remained unchanged for six weeks at a constant temperature of 70° F. Cod-liver oil, 4 oz.; sugar and gum arabic in powder, of each ½ oz.; winter-green oil, 26 min.; peppermint oil, 6 min.; distilled water, 4 oz.; make a thick mucilage with the gum, sugar, and a small quantity of distilled water, then gradually and carefully, with constant trituration, add the mixed oils alternately with the rest of the water. Two ounces of syrup of calcium lactophosphate or syrup of hypophosphites makes "emulsion of cod-liver oil with hypophosphite, &c."

McElenbie's improved formula for glyconated emulsion of cod-liver oil is as follows:—Prepare glyconin by thoroughly triturating in a half gallon mortar, 9 drachms each of glycerine and yolk of egg; then add 1 drachm oil of bitter almonds, and again triturate till the mixture thickens and becomes creamy yellow. Then prepare a solution of strychnia by dissolving 1 grain strychnine sulphate in 2 oz. water and 4 oz. Jamaica rum. Now add 8 fl. oz. of cod-liver oil very slowly to the glyconin, preferably by dropping from a vial, with constant trituration and occasional addition of the strychnine solution. When finished, and the air bubbles have escaped, the product will measure about 20 oz. It is obvious that any or no medicine may be substituted for the strychnine. Mr. Closer regards the quantity of oil of bitter almonds as unnecessary and too large in every case.

88/22. **Veterinary Works.**—*J. J. J.*—The following are some recent veterinary works which have been well spoken of:—Dalziel, H., "Diseases of Dogs: their pathology, diagnosis, and treatment, to which is added a complete dictionary of canine materia medica" London: Bazaar Office, 1879, 8vo, 1s. Dalziel, H., "Diseases of Horses, &c.," *ibid.*, 1s. 6d. Law, J., "The Farmer's Veterinary Adviser: A Guide to the Prevention and Treatment of Disease in Domestic Animals," with numerous illustrations. Edinburgh: Jack, London: Simpkin, 1879, 8vo, p. 420, 12s. 6d. Mayhew, E., M.R.C.V.S., "The Illustrated Horse Doctor, containing an accurate and detailed account of the various diseases to which the equine race are subjected, together with the latest mode of treatment, and the requisite prescriptions in plain English," 1876, 8vo, 18s. 6d. Others might be mentioned, but some of these will probably suffice.

J. J. J. writes, also, "Can any of your readers oblige me with a formula for tooth-wash, similar to floriline? The one given last month (page 13, column 2) does not give so good a foam, and is not so aromatic."

Will not difference in the quality of the ingredients explain this? Experience in the selection and treatment of the bark, and liberality in buying high-priced aromatics greatly influence toilet articles. Perhaps some reader can enlighten us.

82/1. *W. E. H.*—**Blue-black Writing-ink** (*suitable also for copying*).—In *THE CHEMIST AND DRUGGIST* for June, 1872, p. 188-190, will be found an article by Archibald Paterson on "Our Writing Fluids." We reprint from it the following formula, which had been printed and circulated some years previously by an Edinburgh gentleman as that from which Messrs. Duncan, Floeckhart & Co. made their celebrated blue-black ink:—

Blue Aleppo galls (free from insect perforation) ..	4½ oz.
Bruised cloves	1 drachm
Cold water	40 oz.
Purified iron sulphate	1½ oz.
Pure sulphuric acid (by measure)	35 minims
Sulphate of indigo (in the form of a thinish paste, which should be neutral or nearly so)	¼ oz.

Place the galls, when bruised, with the cloves in a 5-oz. bottle, pour upon them the water, and digest, often shaking, for a fortnight. Then filter through paper into another 50-oz. bottle, and wring out the remaining liquor through a strong clean linen or cotton cloth into the filter, in order that as little as possible be lost. Next put in the iron, dissolve completely, and filter through paper. Add the acid and agitate briskly, then the

* We suspect that this filtration should be delayed till the acid and indigo have been added.

indigo, and mix thoroughly by shaking. Pass the whole through paper, filtering from one bottle to the other till the operation is completed.

The weights used are avoirdupois; the measures, apothecaries'.

On no account must gum or sugar be added or the acid omitted. When intended for copying the proportion of galls is 5½ oz. The following points should be noted:—(1) The cold maceration; (2) the absence of gum; (3) the use of sulphate of indigo, which is a solvent for the black precipitate of tanno-gallate of iron, dispensing with gum, which is only used to suspend this; (4) the deficiency of iron, the pure sulphate being used ought to contain no oxide, so that all the iron is free to combine with the astringents; (5) the use of free sulphuric acid, generally considered detrimental, but certainly added here for a purpose. (Perhaps to make the writing more permanent.)

108/27. **Dandelion Coffee and Cocoa.**—*Ignoramus.*—Dandelion coffee is said by Cooley to be made of dandelion root sliced, dried, roasted, and ground with a little caramel. See also **Lehmann, Karl**, *Fabrikation des Surrogatkaffees und des Tafelsens*: enthaltend die ausführliche Beschreibung des Zubereitung des Kaffees und seiner Bestandtheile; der Darstellung der Kaffee-Surrogate aus allen hierzu verwendbaren Materialien; und die Fabrikationen aller Gattungen von Tafelsenf. Wien, A. Hartleben, 8vo, price 2s. We suspect that dandelion coffee and cocoa are in some cases only so in name.

27/108. *Ignoramus.*—**Indian Cerate.**—This is an ointment resembling spermaceti cerate in appearance, and much sold in the Potteries. Can anyone supply us with its formula?

Cold Cream without fats.—*Vigil.*—

Mucilage of quince	4
Almond soap	1
Stearic acid	10
Glycerine	2

Répertoire des Pharmaciens.

This would probably be less likely to change than ordinary forms. It is clear that a fatty mixture must be softer in summer than in winter, and most chemists meet this difficulty by increasing the proportion of wax in their cold cream as the weather grows warmer. The addition of a small proportion of benzoic acid (¼ dr. to 1 lb.) renders the product less liable to rancidity, and, if acid made from benzoin be used, forms a good basis for the perfumes.

Vigil asks if anyone can supply him with a form for making **Pink Oils**—a valuable preparation.

13/111. *Cheque.*—A paid cheque to B for 10*l.*; a year afterwards A notified B that the cheque had not been presented. The cheque payable to B or order may have been misplaced or paid away, it being B's practice to pay cheques as cash. B requests a second payment. Can he enforce it? What position would A be in if it should prove that the first cheque had been paid to C? Could C claim from A, two years having elapsed?

The cheque should have been presented "within a reasonable time," and the lapse of a year would certainly be more than a reasonable time. B could not, we think, enforce a second payment under the circumstances. He had given a receipt and has probably had value for the cheque. According to his own statement the cheque may be still travelling, and may be brought forward at any day against A. C, with the cheque, would certainly have a strong claim against A, and though B may offer to give A an indemnity, A can hardly be compelled to take it. This, we should add, is not a counsel's opinion, and we would hardly like our correspondent to rely too much upon it.

65/89. *Inquirer.*—**Patent Medicine Licences.**—A patent medicine dealer, with one or more shops in different localities, is not required to take out more than one licence. It is the person who is licensed, not the shop.

PHARMACY IN INDIA.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

CALCUTTA, December 29, 1879.

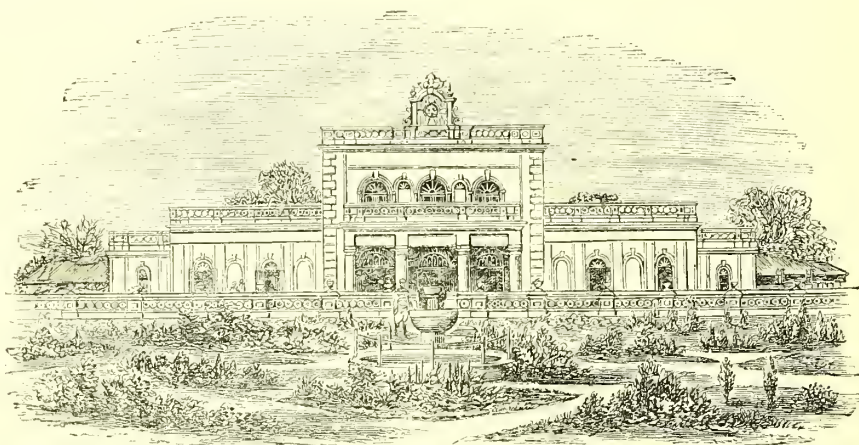
SIR,—Jubbulpore lies midway between Bombay and Calcutta, and on account of its central situation is the site of a large camp. From a naturalist's point of view it is exceedingly interesting, as here for the first time I saw alligators, vultures, and jackals in their wild state. Your subscriber, Mr. Lindsay, is, however, its sole representative in the science of pharmacy.

Allahabad has a considerable European population, and four pharmacists are here making their fortunes, in which pursuit they gain considerable assistance from the pages of *THE CHEMIST AND DRUGGIST*. As all these already subscribe to your journal, my attention was turned to the native dealers in drugs, two of whom who understood English were glad to have their names added to your list, but the shortness of my stay—one day—prevented my seeing any more.

Calcutta, the capital of India, contains—if the suburbs are included—1,000,000 inhabitants. It is, therefore, no "mean city," and its European population would probably nearly equal that of all the other Indian cities combined. It is likewise by far the most important trade centre, both European and native. Here are to be found about a dozen English firms following the profession of pharmacy, and all taking in, and, I am happy to add, sedulously reading, *THE CHEMIST AND DRUGGIST*. On one occasion, wishing

to borrow a recent number, I called on two subscribers and found both had taken their copies home to read! Therefore your position, so far, could not be bettered; but with regard to the native element, there is a grand future before you. You will have gathered from my former letters that there is a perfect mine of wealth, so to speak, unworked, from a journalistic point of view, amongst the native pharmacists of India. I have been impressed with this fact, more or less, ever since setting my foot on shore in Ceylon. Another best confirmation of it has been the large number of names of subscribers sent to you by each post. But it is here in Calcutta that I have first realised the real importance of this new element. The enclosed long list of subscribers very faintly indicates the future circulation of THE CHEMIST AND DRUGGIST in Calcutta, and not only are the dealers in chemicals and drugs numerically large, but their business is very heavy, as must necessarily be the case, when it is considered that the practitioners and dealers of this city alone minister to the wants of more than a million of people. I find that their imports on Europe generally range from 500*l.* to 1,500*l.* each, which will, I think, bear favourable comparison with many home orders. I therefore trust that you will realise the importance of this new element amongst your readers: that I have done so is proved by the enclosed correspondence, &c., by which you will perceive that arrangements have been made to thoroughly work this new ground, and bring the journal under the notice of all the native dealers. It will be no exaggeration to anticipate, in the course of a very few months, an addition to your subscription list of at least 500 names. Most of these are the outcome of English influence, as the vast majority have studied and passed their degrees of licentiates in our hospitals here in the manner described in my Ceylon letter. The majority prescribe and dispense their own medicines, in many cases the prescriber and the dispenser being partners. There are, however, several wholesale dealers also. Rátháá dás Ghosh is a favourable specimen of the rising generation of Hindoos, who has received a good edu-

members of the craft, who wish to subscribe, and E. J. Lazarus & Co., there are none who could be admitted to your list. The firm of Lazarus & Co., who will be recognised as old subscribers, occupy an extensive bungalow, three miles from the native city, but surrounded by the cantonment of the army and the civil and military inhabitants. As the stores where drugs are dispensed in India are so utterly unlike those at home, I send a drawing of Lazarus's, thinking it will be of interest to your readers. It will be observed that there are no signs of the business, nevertheless the whole of the centre of the front is occupied by the dispensing department, while, strange to say, the back and one of the wings are devoted to printing. You will readily understand that the pharmacist in this far-off land is often obliged to deal in other things besides medicines, indeed, with the exception of the largest cities, they always do so, but this is the first instance in which I have found a large dispensing business combined with a large printing-office. Dr. Lazarus, the head of the firm, has been in India for 40 years, the greater part of which time he has lived at Benares. Originally he was obliged to supply his own small printing requirements, and gradually this business has grown until now he employs a large staff and does everything on the premises except making paper. He also prints in the vernacular as well as English, and has recently produced a dictionary of the two languages, casting his own type, printing and binding the work. In spite of his Eastern name, Dr. Lazarus hails from Carmarthen, and he is, therefore, the second successful Welshman dealing in drugs met with in my travels. The firm have two specialities which appear to have a good reputation here, viz., essence of chitta and essence of homidismus. The success of this firm has caused a native to open a business combining the two departments, and which he calls the New Medical Press Hall. This gentleman also publishes a weekly newspaper, of which I send a copy, but whether the unnatural combination will answer as well as that called forth to meet a want remains to be seen.



cation himself, and is anxious that his countrymen should reap all possible advantages from their connection with England. He studied at the Calcutta Medical College, took his degree of licentiate of medicine and surgery, filled the office of house physician there, and afterwards performed the duties of resident assistant surgeon to the Campbell Hospital.

This gentleman, in the prime of life, is now in extensive practice in Calcutta, and, in conjunction with Messrs. Sinzho Dop Mallick & Co., pharmacists, of the same city, is about to commence the publication of a monthly journal, to be called the *Calcutta Medical News*. This journal is intended to reproduce recent improvements and discoveries in medicine, surgery, pathology, materia medica, therapeutics, and all the sections of medical science, so as to enable Indian practitioners to take a view of the monthly progress of practice in Europe and America. The scope of the *Calcutta Medical News* will not be confined to the reproduction of articles, but it is intended to supply its readers with a knowledge of the indigenous drugs of India, as taught by the Sanserit School of Medicine, as well as their physiological actions and therapeutic uses, and generally to treat of Indian drugs. It will also, from time to time, give particulars of such clinical and pathological cases of interest as may occur in connection with the hospital and outdoor practice of the more eminent local professional men. In some cases vernacular translations of the abstracts and communications will be appended.

Benares is the most sacred city of Hindoo land, and as all good followers of Vishnu and Siva believe in the healing virtues of the sacred waters of the Ganges beyond all drugs or therapeutic compounds, it was not to be expected that medical science and the calling of the pharmacist would flourish here. Such proves to be the case, both doctors and chemists and druggists being much below par; indeed, with the exception of the few native

AGRA, January 20, 1880.

Although Allahabad is the capital for administrative purposes of the North-west of India, the cities of Agra and Delhi, the ancient capitals of the country, maintain their pre-eminence, and both from their position and their accumulated architectural treasures, are never likely to be displaced. From the North-west all initiative seems ever to have proceeded in India. With the exception of our own, the wars of conquest have invariably flown hence, and if ever this Eastern realm is to slip out of our hands, certain it is that the movement will proceed from this region. Even now the cleverest conjurers and naggiest Nautch girls hail from the North-west, while such arts as India possesses, its marble and ivory work, its jewellery, and all its textile manufactures (except plain cotton goods), its carpets, shawls, and paintings, own the same district for their home.

I have been led into this train of thought by finding a new movement in progress here which will possess some interest for the readers of THE CHEMIST AND DRUGGIST. I therefore quote in extenso a petition that is being extensively signed for presentation to the Viceroy:—

The undersigned has the honour to lay before the public of the accompanying petition, which is to be presented to His Excellency the Governor-General in Council, and begs their support, to aid him in bringing his project to a successful conclusion. It would be waste of time to speak further on the great necessity of having some Act passed prohibiting the indiscriminate sale of poisonous drugs or compounds. By the passing of such an Act the public would limit the extent of the danger, whilst by neglecting such a measure they can never be perfectly confident that they are not being treated to their hurt, or that their requirements are meeting with proper attention.

The undersigned begs the favour of residents appending their names to the accompanying petition.

J. T. EILNEY, Pharmaceutical Chemist.

Agra.

HIS EXCELLENCY BARON LYTTON, OF KNEBWORTH, G.M.S.I.
VICEROY AND GOVERNOR-GENERAL OF INDIA.

The following Petition of the undersigned Residents of the City and Cantons of
and its neighbourhood,

RESPECTFULLY SHEWETH—
THAT,

I.—It is expedient for the safety of the public who have recourse to druggists or chemists, that persons following such occupations should have an intimate knowledge of the drugs or medicines that they deal with, as men using such compounds may through their ignorance cause grievous danger to their patients; and that that end persons not already engaged in such occupations should, before commencing business, be duly examined as to their practical knowledge, and a register of their names should be kept; and also an Act should be passed, intitled AN ACT FOR REGULATING THE QUALIFICATION OF PHARMACEUTICAL CHEMISTS, to be hereinafter described as the PHARMACY ACT.

II.—Any person who, at the time of passing this Act, has not passed any such examination, but can satisfactorily prove that he has been three years actually engaged and employed in the dispensing and compounding of prescriptions, as an assistant to a pharmaceutical chemist, should, on passing such a medical examination as the Board (hereinafter provided for) may order, be registered as a chemist and druggist under this Act.

III.—For the efficient working of such an Act your petitioners pray that there be three Boards, which shall be endowed with power to pass persons after examination to enable them to pursue the avocation of a chemist or druggist; and that these Boards should hold their examinations once a year, in Calcutta, Allahabad, and Lahore. Such an Act has been passed at home, and subsequently was extended to the colonies, therefore the undersigned beg that immediate attention be granted to the subject, and that an Act entitled the "Pharmacy Act" be speedily brought into law, having for its provisions the restriction of the sales of drugs, compounds, or poisons, by incompetent persons.

Your petitioners as in duty bound will ever pray.

Mr. Bilney, of the firm of John & Co., of this city, seems to have taken the initiative in this matter, and although I cannot think that India is at present prepared for such an act as he proposes, still nothing but good can come of its discussion, and everyone must wish him God-speed in his laborious and spirited undertaking. Mr. Bilney is a member of the Pharmaceutical Society and member also of the Victoria Pharmaceutical Society, in which capacity he gets from our Antipodes THE CHEMIST AND DRUGGIST as published there, together with the local supplement, which the Australian Society binds with your journal, and sends to all its members.

The pharmacists of the North-West of India, though numerically small, prove to be a very active body. Nowhere have I found more energy, or better stocked stores. Here especially, where it has two representatives, does this remark apply, and a large and increasing business is being transacted by both firms, their purchases being mainly procured from advertisers in your journal.

Delhi would seem to present a good opening for a really first-class pharmacist. The business there is principally in the hands of the natives, who no doubt possess the confidence of their own people, and with the aid of your journal will now become better acquainted with the markets. There is only one other chemist and druggist there.

December 29, 1879.

YOUR ROYAL CORRESPONDENT.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

DEAR SIR,—Lest many of your numerous readers should derive some erroneous impressions from your Indian Correspondent's letter in your last issue, I think it desirable to mention, as one who has assisted Mr. Phillips, of Poona, in his business, that the branch shop in the dense native quarter described therein contains as many good shop bottles as some dispensing establishments at home, and that Mr. Phillips is only enabled to do the large dispensing business mentioned at this branch, by means of his connection and influence at his principal establishment in the camp, which is second to none in Poona, and for which he is now building new and extensive premises.

I am, dear sir, yours respectfully,

J. COLLISHAW.

6 Evershot Road, Tollington Park, N., February 11.

J. G.—Mayer's Reagent is used for the quantitative estimation of alkaloids. It consists of 13.516 grammes of mercuric chloride, and 49.8 grammes of potassium iodide in a litre of water. Each centigramme of this solution precipitates .0167 gramme of strychnine; .0233 gramme of brucine; .0108 gramme of quinine, and so on. The final reaction is found by filtering from time to time a drop on a glass plate, resting upon a blackened surface, and adding the test until no precipitate appears. The results are only accurate when the strength of the solution of the alkaloid is about 1 : 20.

81/70. Student.—It is impossible to make turpentine incombustible without first destroying it. John Lizar's "System of Anatomical Plates" was published in Edinburgh, 1822-26; 101 plates and text, 7 guineas; plates coloured, 12 guineas. This has been resold at 52s. 6d., and a coloured copy at 5l. 15s. 6d. A "new and considerably improved edition," 101 coloured plates, royal folio, was published at the same price at Edin-

burgh in 1841; it has been resold at 5s. The formula of the powder you send could only be discovered by a complete analysis, which would cost you 2 to 5 guineas. If you will tell us for what purpose it is required we will endeavour to supply you with a substitute. All questions relating to registration are entirely within the jurisdiction of the Pharmaceutical Council. There is no appeal, and hardly any criticism possible. In the case you mention only the formality of the certificate was questioned, and the Council has decided according to equity, though perhaps not strictly according to law.

POTASSIUM BICHROMATE A POISON.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—In the January number of THE CHEMIST AND DRUGGIST you give extracts of a case of poisoning by potassium bichromate recorded by me in the *Lancet* of September 27. I see in the *Lancet* of January 31, 1880, another similar case. I have been informed that in the "Medical Digest" several cases are recorded, so that apparently it is getting well known as a poison, and is used intentionally, as in the case recorded recently in the *Lancet*. As such, my object in writing to you is to see if steps cannot be taken to induce the Pharmaceutical Society to place it on the list of poisons. Under the present system any person can obtain large quantities not only at a chemist's, but at any oil shop, by simply asking for it.

I am, sir, yours obediently,

A. DUNBAR WALKER.

56 Ladbrooke Grove Road, Notting Hill, W., January 31.

HOMER'S MEDICAL KNOWLEDGE.

Last month we commented very briefly on a study on "Homer's Medical Knowledge," which had appeared in the *British Medical Journal* from the pen of Dr. Henry Dunbar, author of a "Concordance to the Odyssey." That gentleman, writing from Doseobel, Garloch-head, thus alludes to our criticism:—

You state that "We see nothing very wonderful in the fact that Homer knew the Greek names for the belly, the hair, the eye, or the lung, though the names look scientific enough." What I wrote implied that Homer not only knew the Greek names for the belly, &c., but that he was the first to apply them to the different organs of the body, which names have held their place from his time down to the time of Hippocrates, Galen, and down to our own day. If Homer never saw the interior of a "corpus humanum," is it not very wonderful that he should give the exact names describing exactly in their meaning organs of the body he never saw? I think it is.

61, 89.—*Nid Desperandum* has some discoloured cod-liver oil, which he wants to bleach. He has tried animal charcoal, but with no good result. Can any practical pharmacist help him? **Worm Cakes.**—The following is a formula given by Beasley:—Calomel, 20 grs.; jalap, 1 drachm; ginger, 2 scruples; sugar, 1 oz.; cinnamon to colour; syrup, q. s. to form 10 cakes.

25, 113. W. A.—We published the analysis you refer to in February, 1869, but the number has long been out of print. The bottle contained 8½ fluid ounces of a colourless fluid with a yellowish grey powder, the latter consisting of sulphur with a trace of carbonate of lead, the solution containing acetate of lead and glycerine. Analysis indicated 75.6 grains of sulphur and an amount of lead equivalent to 87 grains of the acetate.

PRELIMINARY EXAMINATION.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—Pardon me for encroaching on your time and space, but really I cannot refrain from making known my opinion in regard to the above. It is ridiculous to think that anyone could write out so large a paper in three hours without even a piece of blotting paper under the examination paper. Nothing but the hard table under it is really scandalous. I hope the Board of Examiners will take it into consideration, and in future supply something to put under our paper, and that poor souls, like myself, who are not good hands at the pen will get half a chance.

I am, dear sir, yours, &c.,

AN APRENTICE.

P.S.—I am not sure whether it is the Board of Examiners or the Pharmaceutical Society that have to do with it.

108/27. **Taraxacum Coffee**, according to J. R. Jackson, of Kew, is largely used in India, and is there made as follows:—Fresh dandelion roots are washed, dried in the sun, and cut up into small pieces, after which they are roasted like true coffee; they are then ground, and to every 9 oz. of coffee 1 oz. of the powdered dandelion may be added. These proportions make an excellent and useful beverage.

P., in 1844, stated that *Twaracum coffee*, he had been told, was made of British-grown coffee.

89/2. **L. B. N. - Barium in White Lead.**—Weigh a portion of the pigment, and transfer it to a tared filter, wash it with ether till the filtrate leaves no oily residue on evaporation; dry filter and all in an air-bath at a moderate temperature, and weigh. On deducting the weight of the filter the percentage of colouring matter in the pigment will be obtained. Transfer the solid matter to a small flask, and warm it with dilute nitric acid; when all action has ceased, filter and wash the residue on the filter till the wash-

ings cease to affect litmus. Dry and weigh. Any barium sulphate will be left in the residue, which may be examined in the ordinary way. The filtrate may be examined for metals other than lead.

Glycerine Jelly.—A correspondent favours us with the following form for a very clear jelly:—

Glycerine, rosewater, of each 4 oz.
Gentian lozenges (Nelson's) 10 in number.

Dissolve *secundum artem*.

Aectum Ipecacuanhæ.—*W. H. T.*—Two formulæ for this preparation have been published. Ferris & Co., of Bristol, macerate an ounce of bruised ipecacuanha in a pint of dilute acetic acid for eight days, express and strain. The product is a bright yellow solution, which deposits no sediment of any kind. Dr. Dyce Duckworth recommends the following:—Macerate an ounce of bruised ipecacuanha with an ounce of acetic acid for 24 hours; pack in a percolator, and pour distilled water gradually over it till a pint of the percolate is obtained. Dose, 10 to 15 minims; as an emetic, $\frac{1}{2}$ oz. The oxymel may be made by mixing a pint of the acetum with 2 lbs. of honey, evaporating to a proper consistence.

R. H.—We think the preparation would be liable. You will get a more authoritative opinion by applying to Somerset House direct. **Eye Ointment.**—Many authorities recommend that the red oxide of mercury ointment should be diluted to the extent named by Squire, but it is also often applied in a stronger form, as in Singleton's ointment, which is generally regarded as equal in strength to the ointment of the Pharmacopœia.

3/116. *A. S.* asks us to decide whether it is legal to sell, as brown vinegar, a mixture of acetic acid, burnt sugar, and water. We cannot take upon ourselves judicial functions, nor dare we assume the tone which is becoming so natural to our friends the analysts. But we should venture to think that the above compound would be truly enough brown vinegar, and would pass as such before a Bench. It is as well to add, however, that it would not be malt vinegar.

3/113. *L. J. H.*—Licences for the sale of methylated spirits may be taken by anyone except "distillers, or rectifiers, or dealers in or retailers of beer, spirits, wine, or sweets."

54/88. *J. M. P.*—**Herb Beer** (Stomachic Beer).—Centauri tops, Roman wormwood, bruised gentian, of each 2 oz.; the peel of six Seville oranges; angelica root, 1 oz.; cinnamon or nutmeg, $\frac{1}{2}$ oz.; new ale, 1 gallon. Digest for a few days and strain. One or two wineglassfuls an hour before meals.

52/87. *W. H.*—**Marron Cosmetique.**—This is a brown cosmetique, with a rather different shade. The pomade is made by mixing 5 parts of lard and 2 parts of wax, and tinting with finely-levigated sienna brown, instead of brown nut, which is used for the ordinary brown cosmetique. We cannot give you a formula for Worcester sauce. We tried to give one once to a correspondent, and we supplied him with something we had found in an American paper. Messrs. Lea & Perrins said the formula was not correct, and that the publication of such spurious information was calculated to do them injury. We made our apology in about half-a-dozen journals. Perhaps you would like to have the formula for the American imitation. Please note that it is not Worcester sauce:—

White vinegar	15 gallons
Walnut and mushroom ketchup, of each ..	10 gallons
Madeira wine	5 gallons
Table salt	25 lbs.
Cant'n soy	4 gallons
Allspice and coriander (powdered), of each ..	1 lb.
Mace and cinnamon, of each	$\frac{1}{2}$ lb.
Asafetida	$\frac{1}{2}$ lb.
Dissolved in brandy	1 gallon

Boil 20 lbs. of logs' liver for 12 hours with 10 gallons of water, frequently renewing the water. Chop up the liver, work with the water, strain, and mix with the other ingredients. It is right to state that Messrs. Lea & Perrins objected especially to the intimation that they employed logs' liver.

85/7. *Agricola.*—We cannot explain the discrepancy without more knowledge of the circumstances. Several causes may combine. The two samples may have been taken from different sacks or different parts of the same sack, and this would be quite sufficient to explain it; or possibly you do not calculate the phosphate in the same condition as in the other analysis. It is advisable, when results are so much at variance, to repeat the estimation by a different process. The new volume of Fresenius, we believe, has not yet appeared.

89/20. *W. F. W.* writes:—"Can anyone give me a form for essence of ginger ale, and also essence of froth or French cream for putting a head on aerated waters, for use, not for sale?"

Mr. Thresh's paper on soluble essence of ginger will be found on page 371 of our last volume. French cream is made, we believe, by only one firm, and its formula has never been published. We shall be obliged to any correspondent who can throw light on the matter.

88/18. *J. McG. & Co., Liverpool.*—We have been unable at present to get the information you desire, but we are making further inquiries.

82/33. *J. T.*—The chemists at Somerset House are employed by the Inland Revenue Department to investigate all chemical questions bearing on the revenue. A great many are employed, and we believe there is no uniform salary. They examine suspected samples of manufactured tobacco, of tea, coffee, and spirits, as sold to the consumer, of methylated finish, and other articles which are liable to be adulterated, or to be below the standard imposed by law.

M. I.—A crystalline pomade is generally sold as **Cream of Honey**. That is made by melting 1 oz. of spermaceti in 8 oz. oil of almonds, but we should hardly care to guarantee that compound as the "reliable and genuine" cream of honey which you are in search of.

The Good Old Times.—Mr. F. Saunders (West Gorton, Manchester) sends us a letter on "An Evil and its Remedy." He says that "ever since the passing of the Pharmacy Act the drug trade has been at a disadvantage." He then traces the misfortunes of druggists to (a) the bitter enmity of the medical profession, and (b) the dabbling in drugs by grocers and provision dealers. Without troubling himself to show the connection of his argument, our correspondent concludes thus:—"The remedy for the evil is very simple, and consists in the total repeal of the Pharmacy Act—nothing else will do. Free trade in pharmacy and the public will discriminate (as they did before) between druggists, grocers, and slop tailors, but now know that 'chemist and druggist' is little more than an empty title—easily to procure, but when got of little use to the owner. I shall be glad to co-operate with any of your readers who would like to see the trade restored to its former honourable position."

89/16. *J. J.*—**The New Pharmacopœia.**—It is impossible to say when the new edition of the British Pharmacopœia is likely to be published. The original intention seems to have been to issue decennial revisions, but as an addendum appeared in 1874, and no steps have been taken to produce its successor, it will probably be many months, perhaps years, before a new edition is published.

89/46. *Shorthand.*—Pitman, of Paternoster Row, E.C., publishes a six-penny introduction to shorthand. This gives elementary instruction, and full information as to more advanced books. Cook's "Structural Botany" thoroughly studied would undoubtedly be sufficient for the structural part of the *Minor* examination in botany, but it is impossible to study it thoroughly without comparing and contrasting it with other and larger books. It is always unwise to trust to a single book. Holmes' "Botanical Note-book" and Oliver's "Elementary Lessons in Botany" are useful for descriptive and systematic botany, and either Bentley's or Balfour's manual should be studied later. Latin and French or German are required for the Bell scholars' ip.

Suum Cuique sends a rejoinder to Mr. Stedman's letter in our last, but he turns it into a dissertation on the relative rights of the makers of children's powders, a dispute which we think may fairly be left to the proprietors themselves, and for which they should pay as an advertisement if they want anything of the kind.

THE PATENT MEDICINE ACT.

Messrs. B. Newham & Co., of Castle Hill, Sheffield, write to us, enclosing a circular which they have prepared, suggested by some recent threatened prosecutions at Sheffield. This circular states that "the Inland Revenue authorities have of late, we believe, inflected fines, more or less heavy, upon some 15 or 20 druggists in Sheffield alone. One unfortunate individual informs us that for the heinous offence of selling 22 penny-boxes of pills he has had 220*l.* demanded from him. Another was fined, we are informed, for selling two pennyworth of white liniment, and others for a pennyworth or two of cough lozenges."

They then quote from the schedule of the Act of 1812 a number of the specially-named medicines which must bear a stamp. These include cephalic snuff, Friars' Balsam, Eau de Cologne, hooping-cough drops, aniseed lozenges, ginger lozenges, peppermint lozenges, tincture for the teeth and gums, toothache fluid, &c.

Ginger and peppermint lozenges, as they add, were afterwards specially removed from the schedule, and also there is a vague exemption of such preparations as "have not been, are not, and will not hereafter be patented, advertised, or held out by labels or handbills, &c., as beneficial."

Our correspondents especially comment on the hardship of enforcing a tax on very small quantities of medicines. This, we are informed, has been done in Sheffield, but we have not details of the cases, as none came before a court, and no one seems willing to stand forth. Messrs. Newham & Co. therefore urge the advisability of pressing for a new clause to the Act to the effect "that this Act shall not apply to any article sold at a less cost than fourpence."

They ask any person willing to assist, or having any suggestion to make, to oblige by communicating with them.

In their letter to us they say:—"We do not think it of any use waiting for any action of the Pharmaceutical Society: it would simply be postponing the matter to the 'Greek Calends.' If it is asked why we have taken upon ourselves to move in the matter, we can only reply that we shall be pleased to step down and out whenever anyone else comes forward in our place. We have moved simply because no one else did."

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begs most respectfully to inform the Trade that, with the aid of recent additions and improvements in his Manufactory and Laboratory for the carrying out of the Manufacture of Medicated Lozenge, &c., and Chlorodyne, he is now in a position to execute orders as promptly as is possible, consistent as the nature of the various orders will allow. The P.B., T.H., proprietary speciality, and any other Lozenges that might be wanted, I guarantee to be most faithfully prepared under my personal supervision, and beg to introduce to your notice the following specialities:—

Bouquet Lozenges, No. 1 size, about 250 to the oz.	3/6 per lb. net.	Bronchial Cough Lozenges (similar to Brown's Troches) ...	2/6 per lb. net.
„ „ No. 2 „ „ 180 „	3/0 „	Chlorodyne „ (white and brown)	2/3 „
„ „ No. 3 „ „ 100 „	2/6 „	Children's Cough Lozenges (guaranteed to contain no Opium, and yet are a most effectual sweetmeat)	1/6 „

The most effectual Worm Medicine of its kind ever prepared.

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Sciatica	Epilepsy	Mental and
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Writer's Cramp	Gout	Functional Disorders
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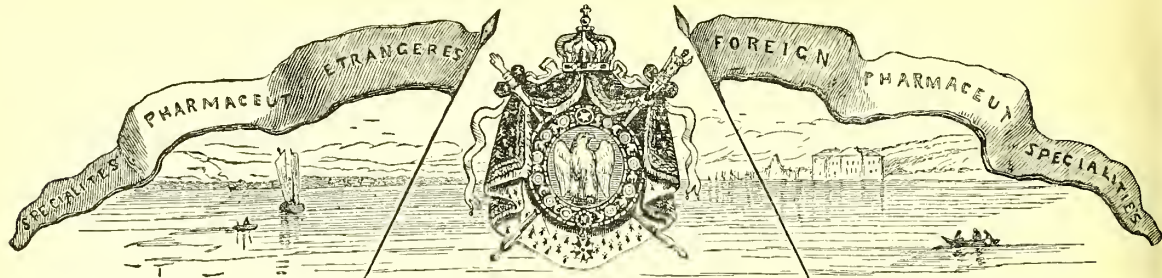
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2/9.. Ditto ditto	..21/	4/6.. " Mathey Caylus	..22/	2/3.. Guyot's Goudron	..17/	3/6.. " Sirop	..27/
3/6.. Aubergier's Syrup	..27/	4/6.. Chassaing's Wine	..36/	11/.. Laville's Gout Tincture	..84/	4/6.. Racahout	..33/
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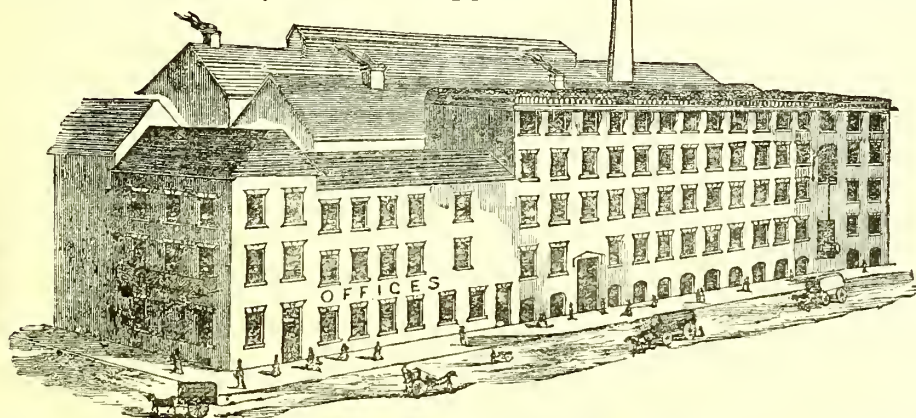
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Carefully purified from Arsenic, Copper, Silver, Tellurium, Selenium, and all contaminations. Dose: 5 j. diluted.

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And to be obtained of all Wholesale Druggists in London and the Provinces.

SYRUPUS CINCHONÆ ALCOHOLICUS SCHACHT

Bark minus woody fibre. Dose: 10 to 30 drops.

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COMMONLY CALLED

FATHER CLEMENT'S RESTORATIVE SYRUP.

It is extracted from rare Spanish and American Herbs, Roots, and Fruit, hitherto almost unknown in England.

PRICE . . . 2s. 9d.

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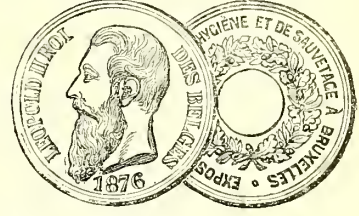
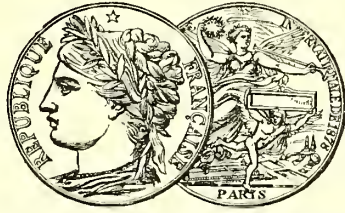
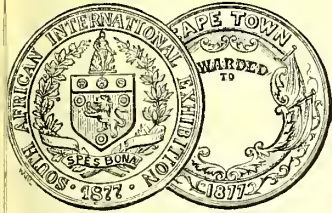
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JOHN RICHARDSON & CO.'S

Soluble Pearl-Coated Pills.

IMPORTANT NOTICE.—PEARL-COATED PILLS FOR EXPORT.

It is well known that large quantities of Coated Pills are made in England, which, although perfectly satisfactory in appearance when recently made, are very soon spoiled by becoming cracked and discoloured, and consequently utterly unfit for exportation. Some of our correspondents in the Colonies have informed us that they have received consignments of such Pills, which upon their arrival have been perfectly unsaleable, and great loss and disappointment have thereby been occasioned.

As we have for nearly 20 years exported very large quantities of our Soluble Pearl-Coated Pills, and have received most satisfactory reports of their excellent condition upon arrival, we have now no hesitation in affirming that the only guarantee for Shippers and Exporters securing for their friends perfectly saleable Coated Pills is to order those of our make.

As proofs of the keepable properties of our Pills we subjoin the following highly satisfactory Testimonials, some of which are quite recently been received:—

"A SEVERE TEST."

Jan. 8th, 1880.

Gentlemen,

I have great pleasure in testifying to the great satisfaction your Coated Pills have given me. The Pills I enclose to you were some I got from you about three years ago, and since then they have gone through a severe test, having made four Voyages to South America, three being to the West Coast and two to the West Indian Islands. They were kept in a tin box, anything but air-tight, and had no protection from damp. The Coating could not be in better condition, and, having used some lately, I found their efficacy quite unimpaired.

Messrs. John Richardson & Co.

GEO. T. COURTENAY, Esq., L.R.C.P., &c., Birkenhead.

RECENT TESTIMONIALS.

DEAR SIR,—Having for many years past used your *Pearl-Coated Pills* in our Dispensaries, both from formulae supplied by us and from numerous others contained in your list, and which we now regularly adopt, we have great pleasure in testifying to their undeviating efficacy, as also to the satisfaction they have given to the leading medical gentlemen of the city, for whom we dispense, and who have every confidence in them. We have found from our own experience that they are readily soluble in the stomach, and that when Quinine, Morphia, Opium, &c., are given, the result has always been in accordance with that expected.

We are, dear Sirs, yours faithfully,

ADELAIDE, SOUTH AUSTRALIA, June 16th, 1879.

MAIN & GEYER (Chemists and Druggists).

DEAR SIR,—I am pleased to inform you that I have used your *Pearl-Coated Pills* in my business for a considerable time, and with decided success. They give the greatest satisfaction to my customers, who seem to appreciate them very highly. They are remarkably well made, the coating perfectly soluble in this climate, and yet quite soluble. I have had no complaints respecting their action, I therefore conclude that they are conscientiously dispensed.

I am, dear Sirs, yours faithfully,

KURRACHEE, INDIA, November 29th, 1877.

E. SPEECHLEY (Chemist and Druggist).

GENTLEMEN,—I have very great pleasure in bearing my unqualified approval of the various preparations manufactured by Messrs. Richardson & Co., of Leicester, which have been submitted to my notice by their Agents at Geelong, Messrs. Bull & Owen. I consider their *Coated Pills* a vast improvement on the old form of Pills, and further, I am satisfied that in composition they are what they profess to be, from careful observation of their effects, which have been specially manifest in the Pills containing Phosphorus and Strychnia, the physiological effects have been well marked. I have experimented considerably with Liq. Secalis Ammon., and I unhesitatingly assert that it is by far the most reliable preparation of Ergot that I have employed.

GEE LONG, SOUTH AUSTRALIA, November 25th, 1879.

RUPERT PINCOTT, M.R.C.S. ENG., &c.

GENTLEMEN.—We have been selling your *Pearl-Coated Pills* in this Colony for several years, and have sold thousands of gross without ever having a complaint, and when we have been out of certain numbers our friends have been disappointed at not being able to get them. We have no hesitation in saying they are in this Colony highly appreciated.

Yours truly,

C. & A. E. PULLING (Chemists and Druggists).

MELBOURNE, VICTORIA, SOUTH AUSTRALIA, August 6th, 1879.

Just Published, the Sixth Edition of our SOLUBLE PEARL-COATED PILLS,
containing nearly 700 Formulæ.

CAUTION.—We are the largest makers of the "Soluble" Pearl Coated Pills in the World and this result has not been achieved without unscrupulous imitators, who frequently send their own worthless productions when our goods have been specially ordered. The Profession are earnestly requested to order distinctly "RICHARDSON'S."

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By this valuable "Specific" hundreds have been cured of this distressing malady. For Cold in the Head, with Noises in the Ear, it is most efficacious. The highest testimonials are enclosed, with directions for use with each bottle

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"EDGEASTON, MAY 4, 1877.—Sir,—My niece, who came to stay at my house, was suffering from Deafness and difficulty of breathing, owing to weakness of the tonsils caused by Quinsy. She tried your wonderful 'Specific,' and after applying it a little more than a week her hearing and breathing were quite restored. I am glad to communicate this as the medium of personal thanks and for the good of others.—Yours truly, C. L."

"CLAPHAM, SEPT. 5, 1877.—Sir,—Be so good as to send me six bottles of your 'Cure for Deafness,' and you will oblige. I am much better. Shall I go on with it? Be so good as to let me know. It has done me more good than physicians to whom I have paid twenty guineas; they cannot do me any good.—Yours, &c., J. P."

"CRYSTAL PALACE ROAD, EAST DULWICH, JUNE 10, 1878.—Sir,—During the last few weeks my little girl has been quite deaf, and suffering considerable pain in her left ear. I was recommended to use your 'Golden Drops for Deafness,' and I am delighted to say that, after applying them three times, they brought away two large secretions of foul matter. The child can now hear distinctly the faintest sounds, and is free from pain. I send you this testimonial unasked, in the hope that its publication may increase the sale of your truly valuable 'Golden Drops.'—Yours respectfully, I. H. S. N.B.—If you will send me some testimonial sheets I will distribute them amongst my friends."

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TOWLE'S CHLORODYNE

The Original Preparation, as approved by the Medical Profession on account of its known composition and uniform strength.

Retail at 13½d. 2s. 9d., and 4s. 6d. Dispensing, 4 ozs., 4s. 6d., and 10 ozs., 11s., stamped.

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As originally introduced by A. P. Towle, and free from stamp duty for dispensing.

4 ozs., 4s.; ½ lb., 5s. 6d.; 1 lb., 10s.

TOWLE'S CHLORODYNE LOZENGES AND JUJUBES

In 1, 2, and 4 lb. Bottles, at 3s. per lb., and 6d. and 1s. Boxes. Foiled, Lined and neatly got up for the counter, 4s. 6d. and 9s. per doz.

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Bills with name on application with instructions for forwarding.

Dr. J. COLLIS BROWNE'S CHLORODYNE.

THE ORIGINAL AND ONLY GENUINE.

IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD, and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as liberally untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the Inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

FURTHER IMPORTANT NOTICE.

The subjoined list of eminent Firms concern with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:—

Apothecaries' Hall,	London.	Gale & Co.,	London.	Newbery & Sons,	London.
Allen, Hanbury & Co.,	"	Giles & Son,	Clifton.	Oldham, G., & Co.,	Dublin.
Baiss Brothers,	"	Goulding, Messrs.	Cork.	Parsons & Richardson,	Leicester.
Banks & Richards,	Birmingham.	Gratton & Co.,	Belfast.	Peake, Allen & Co.,	Dublin.
Barron, Harvey & Co.,	London.	Grimwade, Ridley,	London.	Raimes & Co.,	Liverpool.
Bell, John, & Co.,	"	Grindley & Son,	Chester.	Raimes & Co.,	York.
Bourne & Taylor,	"	Hearon, Squire & Francis,	London.	Raimes, Blanshards & Co.,	Edinburgh.
Corbyn & Co.,	"	Hodgkinson, Tonge & Stead,	"	Sang & Barker,	"
Cox & Gould,	"	Hopkins & Williams	"	Sanger, J., & Sons,	London.
Curling & Co.,	"	Hunt & Co.,	Exeter.	Sim, James, & Co.,	Aberdeen.
Curtis & Co.,	"	Hunt, A., & Co.,	"	Smeeton, W.,	Leeds.
Davy, M. Murdo & Co.,	"	Johnson, J. H. & S.,	Liverpool.	Southall & Co.,	Birmingham.
Drew, Barron & Co.,	"	Langton, W., & Co.,	London.	Sutton, W., & Co.	London.
Drew, B., & Alexander,	"	Lynch & Co.,	"	Tomlinson, Hayward & Co.,	Lincoln.
Dunn & Company,	"	Mander, Weaver,	Wolverhampton.	Treacher, Hodgkinson & Co.,	"
Edwards, W.,	"	Marsden & Sons,	London.	Westrup, J. B.,	Kensington.
Evans, Gadd & Co.,	Exeter.	Maw & Son,	"	Westwood & Hopkins,	Lincoln.
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After these public statements in a Court of Equity, and subsequent confirmation by the trade at large, no Chemist can conscientiously use or sell any other compound for Chlorodyne without committing a breach of faith, unjust to patient and physician. The value of the remedy alone creates the great demand.

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PEPSINE ELIXIR.

HYDROBROMIC SYRUP OF THE HYPOPHOSPHITES.

Araroba, Caroba, Baycuru, Jaborandi, Eucalyptus, Bolelo, Coca, Rhamnus Frangula, Guaco and Preparations, obtainable through the Wholesale Houses; from

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Manufacturers of

MORPHIA AND ITS SALTS,

And all Products from Opium; also

PURE CHLOROFORM.

Answering all the Tests of the British Pharmacopœia.

extensively used in the Hospitals and by Private Practitioners, and is rapidly superseding the expensive Alcoholic Preparation.

MAY BE HAD FROM ALL THE WHOLESALE HOUSES, AND AT

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Concentrated Infusions, Concentrated Decoctions, Extracts, Expressed Juices, Liquors, Tinctures, and Wines.

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The GENUINE SYRUP of "EASTON'S" SUPERPHOSPHATE of IRON, QUININE, & STRYCHNINE.
Pronounced by the highest Medical authority to possess tonic powers far exceeding all other preparations. Medical Men when ordering will oblige by writing "EASTON'S SYRUP (CURTIS)".

LIQUOR SECALIS (CURTIS).

Prepared by the authority of the late President of the Obstetrical Society in 1859. Still maintains its character as a most reliable preparation of Ergot.

OR HEALING POWDER, for Burns, Ulcers, Eruptions, Abrasions of Tender and Irritable Skins.

A preparation which has for years stood the test of Medical experience, as possessing healing Properties of the most marked and rapid character.

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Prepared from Pure and Methylated Spirit.

Put up in all sizes of bottles. A strap with Name and Trade Mark of the Firm is placed over the stopper of each bottle.

For Export, in bottles corked and luted (stoppers attached) and in hermetically sealed flasks when required.

B.—We guarantee our Chloroform prepared from METHYLATED SPIRIT to be PURE CHLOROFORM, answering all the tests of the British Pharmacopœia.

CHLORIC ETHER.

LIQUOR RHEI DULC. | LIQUOR SENNÆ DULC. | SYR. FERRI PHOS. CO. (PARRISH).

Fluid Extracts, Concentrated Infusions, and all Pharmacopœial Preparations.

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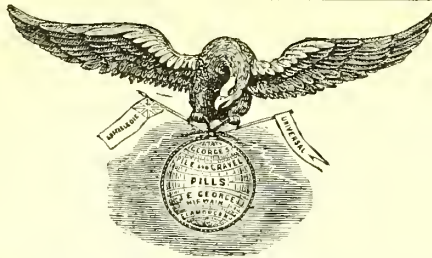
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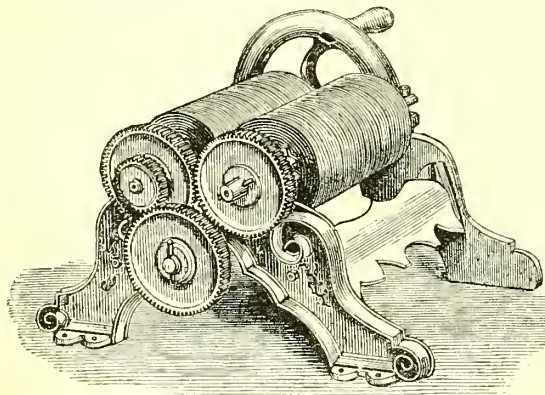
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Turns out One Pound of Pill Mass in perfect Pipes in 3 Minutes.

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Emp. Belladonna, Opium, &c.

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ADHESIVE MARGIN.

Shape	Size	Shape	Size
Square	4½ x 5½	Oblong	6½ x 11
Oval	5 x 7		7 x 13
Saddle	4½ x 9½	Heart	5 x 7
Oblong	4½ x 7		6½ x 8½
"	5½ x 9½	For Breast	7 diameter
"	6 x 8½		

Terms on application to the Sole Manufacturers,

GOOSEY & ROGERS, Chemists,
Stepney, London, E.

Can be ordered through any Wholesale House.

WHO WOULD HAVE THOUGHT IT!

Between thirty and forty years ago a Medicine was introduced to the public, and suffering humanity was invited to try the same.

The Proprietor knew from experience that success was certain, but the human breast is so imbued with prejudice, that it forms one of the strongest barriers to break down and the greatest enemy to overcome before any headway can be made towards the mansion of success. Truth has often proved itself to be "stranger than fiction," and it is a fact as solid as truth that



BEECHAM'S PILLS

have now become one of the leading Patent Medicines of the present day. From north to south, and from east to west, they are to be found in the homes of the rich and the poor. All classes of society use them, and they are by thousands declared to be

WORTH A GUINEA A BOX.

TRADE MARK.
No. 1416.

For a Weak Stomach, Impaired Digestion, and all Disorders of the Liver, they act like "MAGIC," and a few doses will be found to work wonders on the most important organs in the human machine. They strengthen the whole muscular system, restore the long-lost complexion, bring back the keen edge of appetite, and arouse into action, with the ROSE-BUD of health, the whole physical energy of the human frame. These are "FACTS" admitted by thousands, embracing all classes of Society, and one of the best guarantees to the Nervous and Debilitated is, BEECHAM'S PILLS have the LARGEST SALE of any Patent Medicine in England.

In South Africa BEECHAM'S PILLS have the largest sale of any Patent Medicine ever introduced into that part of the World.

All Patent Medicine Dealers abroad will find BEECHAM'S PILLS one of the most profitable and one of the best selling articles in the Market. The demand for them is regular, and all Foreign Houses who are desirous of getting a First-class Patent Medicine are respectfully requested to get BEECHAM'S PILLS from the leading Wholesale Houses in England (as no business will be done with any Foreign House by the Proprietor direct).

CAUTION.—The Public are requested to notice that the words "BEECHAM'S PILLS, ST. HELENS," are on the Government Stamp affixed to each Box of the Pills; if not on, they are a Forgery.

Prepared only, and Sold Wholesale and Retail, by the Proprietor,

THOMAS BEECHAM,
ST. HELENS, LANCASHIRE, ENGLAND.

In Boxes, 1s. 1½d. and 2s. 9d. each.

N.B.—FULL DIRECTIONS ARE GIVEN WITH EACH BOX.

The Chemische Fabrik auf Actien, vormal's E. Schering, Berlin,

MANUFACTURERS OF

SCHERINGS' PURE CHEMICALS

PARTICULARLY OF

ACID, CARBOLIC or Phenol Absolut.	Fine white hard crystals	Free from Cresylic Acid. Watery solution will not show greasy spots floating on top.
ACID, GALLIC	Almost white needles	Freely and entirely soluble in alcohol or water
" PYROGALLIC	Bi-sublimed, white, bulky	Ditto ditto ditto.
" SALICYLIC (Kolbe's)	White, powder, crystallised, and dialysed	Dissolves colourless in water or alcohol purest for medicine.
" TANNIC	Lightest crystals	Dissolves almost colourless in water, alcohol and ether.
" "	Powder and granulated	Dissolves freely in water, alcohol, and ether.
CELLOIDINE (Patent)	Gelatine plates	Purest Pyroxylin; in explosive.
CHLORAL HYDRATE	White cake and crystals	See Liebreich's, below.
CHLORAL HYDRATE (Liebreich's)	Transparent rhomboidals (facsimile of Dr. Liebreich's)	Will not decompose by age, as the ordinary product will do, to the danger of the patient
CHLOROFORM (ex Liebreich's Chloral)	Schering's original label	Free from foreign chlorides. Will leave no odour on evaporation.
CROTON CHLORAL	Shiny crystalline scales. (Powder form most objectionable)	Free from foreign chlorides.
GLYCERINE	S.G. 1260, double distilled, brilliantly white, odourless; also lower S.G. and qualities	Free from lime, chlorides, metals; will stand severest chemical tests.
IODINE	Resublimed, fine scales	Purest.
IODOFORM	Dry yellow scales	Purest, by medical reports.
POTASS, BROMIDE	Fine white dry regular crystals	Perfectly free from iodide, and the most free from chloride.
" CAUSTIC	Lump and stick, white	Commercially pure, and pure by alcohol.
" CYANIDE	Ditto ditto	30%, 45%, 60%, and 95%.
" PERMANGANATE	Large and small crystals	Chemically pure.
" IODIDE	Fine white dry regular crystals	Apply Barytic and other tests. This will never change colour.
SILVER, NITRATE	Fine large crystals	63 to 63½% pure silver.
SODA, CAUSTIC	Lump and stick, white	Chemically pure, and pure by alcohol.
SODA SALICYLATE, and other Salicylates	White powder and crystals	Freely soluble in water and alcohol.

H. FINZELBERG, of Andernach-on-Rhine,

MANUFACTURER OF

ERGOTINE, pure Dialysed ...	Brown colloid, purified by Dialysis	Free from all saline matter present in the ordinary Ergotine and extracts.
FERRUM OXYD. (5% Dialysed)	Transparent brown liquid, purified by Dialysis	Free from all saline matter. Diluted by ten times its weight of water, will stand the test of Nitrate of Silver.
PEPSIN PORCI (100%)	White, sweet, odourless powder ...	Freely soluble in water, not hygroscopic, and will not deteriorate; will dissolve (by Wittstein's test) 100 parts of white of egg and 250 parts of fibrine.

GUSTAV RHODIUS, of Burg Brohl.

MANUFACTURER OF

POTASS, BICARBONATE ...	White powder and crystals	Dissolves bright in water.
SODA, BICARBONATE	Purest white powder, taste neutral, speciality for Soda powder	See tests P.B.
SODA, CARB. (purest)	Dry, for pure Soda Salts	Indifferent to Nitrate of Silver and Chloride of Barium.

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For Quotations, &c., apply to Wholesale and Export Drug and Chemical Houses.

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Increase your Business by Selling the

ORIENTAL COMPANY'S TEA.

IN SUBMITTING THEIR TEAS to Agents, the above-named Company desire to offer the following remarks:—

THE PROPRIETORS have been long connected with the EAST, as IMPORT and EXPORT MERCHANTS, and, with the means their command, are enabled to avail themselves of their experience in purchasing at the proper season, from the best markets, and direct from the TEA PLANTERS, thereby securing the choicest pickings, and saving all intermediate profits between producer and consumer.

THE TEAS being thus bought are carefully cut, sifted, and mixed by the most improved machinery, under the superintendence of a PRACTICAL TEAMAN, whose whole study has been devoted to the ART OF BLENDING TEAS to suit the Tastes of the general public; and it may be added that it is greatly due to judicious blending that the COMPANY'S TEAS have acquired the position they now hold.

INDIAN TEAS have within the last few years obtained such favour with connoisseurs for Strength, Aroma, and Delicacy of Flavour, that THE ORIENTAL COMPANY have introduced, as a SPECIALTY, a blend of these fine Teas, the sale of which has obtained such proportions as to warrant the assertion that it produces the most delicious beverage ever offered to the public.

THE TEAS are packed in specially-prepared wrappers, with TINFOIL LINING, in ¼-lb., ½-lb., and 1-lb. Packets; 5-lb., 10-lb., and 20-lb. Tins; 20-lb. Boxes, Half-chests, and Chests; and retailed as under.

Fine China Blended Tea, Magenta Label				...	...	...	...	Retail at	2/0 per lb.
Finest	„	„	Blue	„	...	...	...	„	3/0 „
Fine	Indian	„	Green	„	...	...	...	„	2/6 „
Finest	„	„	Yellow	„	...	...	...	„	4/0 „

For Terms of Agency and other particulars apply at the Office—

418 OXFORD STREET, LONDON, W.

NESTLE'S MILK FOOD,

For Infants, Children, and Invalids.

London Depot—7 BARBICAN, E.C.

NESTLE'S MILK FOOD is prepared at Vevey, Switzerland, from the pure milk of Alpine fed cows, the finest wheaten flour and sugar, combined in exact proportions to imitate closely the natural food for infants. It is thoroughly cooked, and reduced to fine powder, perfectly soluble in water, requires only the simple addition of water to prepare it for use—in this respect having the advantage over all other foods.

NESTLE'S MILK FOOD is highly recommended by the best medical authorities in all parts of the globe as a perfect diet. Nestle's is the original and genuine Milk Food or Powder. The extensive demand for this Food, its well known superiority and universal recognition by the medical profession, have produced the inevitable imitations. The trade and the public are hereby cautioned. Nestle's Milk Food has stood the test of years. Take no other under any pretence whatever.

NESTLE'S MILK FOOD is put up in tins, packed in lined cases specially for the export trade. Is highly concentrated and in a perfectly dry state. Will keep good in any climate.

Our Wholesale Agents at any port will pack and ship the Food to or for any part of the world.

Wholesale Depot: HENRI NESTLE, 7 BARBICAN, LONDON.

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NELSON'S PURE BEEF TEA.

The Lancet says:—"This is an ingenious and excellent preparation. It dissolves readily in warm water, keeps for an indefinite length of time, and is very portable. Its flavour is all that could be desired. The article includes not only those constituents of the meat which are soluble in hot or cold water, but also much of the fibrin and the whole of the albumen."

Samples and Prices on application to the Manufacturers,

GEORGE NELSON, DALE & CO.,
14 DOWGATE HILL, LONDON, E.C.

NELSON'S SOUPS.

Beef with Peas and Vegetables.

Miss Mary Hooper, Crystal Palace School of Cookery, says:—

"CRYSTAL PALACE, SYDENHAM, Dec. 1st, 1879.

"I have tried your Beef Tea and Soup, and have found them excellent; indeed, in my opinion, they are by far the best things of the kind ever before the public. The Soup is excellent in flavour, and is good nourishment. It is very nice, and is most useful for strengthening and flavouring household soup or broth. It is, besides, so cheap that it cannot fail to be appreciated by all classes of the community, and it will be of great use to charitable people, as it will enable them readily to supply, at a small cost, a good, warm, nourishing meal."

Samples and Prices on application to the Manufacturers,

GEORGE NELSON, DALE & CO.,
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Details of In-
junction granted
by V.-C. MALINS
will be found in
"Chemist and
Druggist," Feb-
ruary 15, 1877,
page 76.



Wholesale Price
Lists, Opinions
of the Press, and
full information
will at all times
be given direct,
or through the
Patent Medicine
Houses.

E. LAZENBY & SON'S PICKLES,
Sauces, and Condiments.—E. LAZENBY & SON
(6 Edwards Street, Portman Square), Sole Proprietors of the
Celebrated Receipts, and Manufacturers of the Pickles, Sauces,
and Condiments so long and favourably distinguished by their
name, beg to remind the Public that every article prepared by
them is guaranteed as entirely unadulterated. Manufactory,
18 Trinity Street, London, S.E.

HARVEY'S SAUCE.—CAUTION—The
admirers of this Celebrated Sauce are particularly requested
to observe that each bottle prepared by E. LAZENBY & SON
bears the label used so many years, signed "ELIZABETH LAZENBY."

MUSTARD.
FINCH, RICKMAN & CO.'S
Genuine Qualities

Are made from the finest mustard seeds only.
Their compounds, as manufactured for upwards
of a century, are guaranteed free from all ingre-
dients imparting spurious heat, and are there-
fore equally suitable for both table and medical
purposes.

Undertake not to supply Co-operative Stores.

6 Broken Wharf, Upper Thames St., London.

ELLIS'S FOOD

(COOKED)

FOR INFANTS AND INVALIDS.



THIS FOOD has been long and successfully used by eminent Physicians, and, containing as it does an excess of Phosphorus and other necessary constituents for the formation of bone and muscle, is recommended by them as the most suitable Food for delicate children, especially for those suffering from scrofula, rickets, or from consumption. It is suitable either for infants at the breast or for those deprived of their natural food, and will be found to agree with the most delicate stomachs. To mothers suckling, this Food is

strongly recommended as a milk producer. It will be found very superior to milk, beer, or stout as a drink. To invalids it is invaluable, being easy of digestion and extremely nourishing, while it has the additional advantage of being palatable and agreeable, either as food or as a drink. In all Diseases of the Chest, Bowels, or Stomach, in Liver Complaints, in Constipation, or in Gravel, it cannot be equalled. It has been known to save life when no other nourishment could be taken.

TESTIMONIAL.—Messrs. ELLIS & Co., London, Sept. 1, 1879. Gentlemen,—The fact that 600 children died in London during the last 12 months of hot weather, from diarrhoea caused by heat and improper food, is very startling and alarming. Milk, which soon sours and becomes only an improper but a dangerous food for children, is said to be one of the chief causes of so much diarrhoea and death. Your Infants' Food, not belonging to the starchy tribe of foods, but containing all the necessary ingredients to sustain life, is what really is so much wanted for infants, mothers nursing, and even for invalids in general, and, when known, will far supersede all other foods now before the public. I have long owned and used the Preparation, and it now gives me much pleasure to recommend it to the public in general, as it is my practice to do to my patients.

I am, yours truly,
T. MOWBRAY HENDERSON, M.D.
Analytical Department, 17 Bloomsbury Square, London, W.C., Sept. 30, 1876. To Messrs. C. P. ELLIS & Co. Gentlemen,—I have examined the sample of Farinaceous Food you left with me, and am of opinion that it contains ingredients well suited to form a wholesome and nutritious food for infants, invalids, and rickety subjects, supplying not only the elements required for reparation and nutrition, but also for the formation of bone.

I am, yours truly,
T. REDWOOD, Ph.D., F.C.S.

Sold in Tins, price 1/2, 2/6, 5/6, and 10/6, by all Chemists and Grocers.

WHOLESALE LONDON AGENTS:
JAMES EPPS & SONS, Threadneedle Street, E.C.
SOLE PROPRIETOR:
J. COLEMAN, St. George's Middle St., NORWICH.

SEVEN PRIZE MEDALS AWARDED.

GOODALL'S HOUSEHOLD SPECIALITIES.

Goodall's Yorkshire Relish

THE MOST DELICIOUS SAUCE IN THE WORLD.
This cheap and excellent Sauce makes the plainest viands palatable, and the daintiest dishes more delicious. To Chops and Steaks, Fish, &c., it is incomparable. Sold by Grocers, Oilmen, Chemists, &c., in Bottles, 6d., 1s., and 2s. each.
Over **FOUR MILLION (4,000,000) Bottles Sold Annually.**
LARGEST SALE OF ANY SAUCE IN THE WORLD.
CAUTION.—On each York-hire Relish Label is our Trade Mark, Willow Pattern Plate, and name, GOODALL, BACKHOUSE & Co., No other is genuine.

Goodall's Baking Powder

THE BEST IN THE WORLD.
The cheapest, because the best, and indispensable to every household, and an inestimable boon to housewives. Makes delicious Puddings without eggs, Pastry without butter, and beautiful light Bread without yeast. Sold by Grocers, Oilmen, Chemists, &c., in 1d. Packets; 6d., 1s., 2s., and 6s. Tins.

Goodall's Quinine Wine

The best, cheapest, and most agreeable tonic yet introduced. The best remedy known for Indigestion, Loss of Appetite, General Debility, &c. Restores delicate individuals to health and vigour. Sold by Chemists, Grocers, &c., at 1s., 1s. 1/2d., 2s., and 2s. 3d. each bottle.

Goodall's Custard Powder

For making delicious Custards without Eggs, in less time and at half the price. Unequalled for the purposes intended; will give the utmost satisfaction, if the instructions given are implicitly followed. The Proprietors entertain the greatest confidence in the article, and can recommend it to Housekeepers generally as a useful agent in the preparation of a good Custard.

Delicious to Plum Pudding.	Delicious to Stewed Rice.
Delicious to Jam Tar's.	Delicious to all kinds of Fruit.
Delicious to all kinds of Puddings.	Delicious to everything.
Delicious to all kinds of Fruit Pies.	Delicious alone.

Sold in Boxes, 6d. and 1s. each, by Grocers, Chemists, Italian Warehousemen, &c.

Goodall's Ginger Beer Powder

Makes Three Gallons of the Best Ginger Beer in the World for 3d.
Is a delicious and invigorating beverage, possessing valuable medicinal properties. It is cooling in its nature, and a most wholesome beverage for both winter and summer. It is easily made, and is by far the cheapest and best Ginger Beer Powder ever offered to the public. Sold in Packets, 3d. and 6d. each, by all Grocers, Chemists, and Italian Warehousemen.

Goodall's Brunswick Black

FOR PAINTING STOVES, GRATES, IRON, TIN, &c.
This invaluable composition is superior to any yet offered to the public, possessing great brilliancy, and thoroughly protecting the article it is applied to. Sold in Bottles at 6d. and 1s. each.
SOLE MANUFACTURERS,
GOODALL, BACKHOUSE & CO., White Horse St., Leeds.
A Monthly Price List of Drugs, Chemicals, Druggists' Sundries, Patent Medicines, &c., can be had post free on application.

FRY'S COCOA EXTRACT,

IN PACKETS AND TINS.

Pure Cocoa only, with the superfluous oil extracted.

It is strongly recommended to all who appreciate the full flavour and aroma of Cocoa.
"It is strictly pure, and well manufactured in every way."—W. W. ODDART, F.I.C., F.C.S., City Analyst, Bristol.
"If properly prepared, there is no nicer or more wholesome preparation of Cocoa."—Food, Water, and Air, Edited by Dr. HASSALL.

J. S. FRY & SONS, BRISTOL & LONDON.
TRY ALSO
FRY'S CARACAS COCOA.—"A delicious preparation."

INDEX TO ADVERTISEMENTS,
See Pages 41 & 42.

ESTABLISHED 1843.

M. A. CRAVEN,

Wholesale & Export Confectioner,

AND MANUFACTURER OF

MEDICATED LOZENGES, REFINED LIQUORICE, JUJUBES, &c.

PAVEMENT, CONEY ST., & COPPERGATE, YORK.

Lozenges of all descriptions made from Customers' private formulæ (or ingredients) and stamped with name if required.

PRICE LIST ON APPLICATION.



MAWER'S TARAXACUM OR DANDELION COFFEE

Prepared from the Fresh Root.

Notwithstanding the many attempts to imitate this incomparable preparation, Mawer's manufacture continues to rise rapidly in public estimation, and the sales have of late immensely increased. Wherever it is introduced it meets with increasing appreciation and continuous sales, for beyond doubt it excels all in quality, strength, aroma, and cheapness.

Chemists everywhere find this the most saleable article of the name. It is neatly packed in air-tight tins, and is spoken well of throughout Great Britain and several of our Colonies. To be had from all London Patent Medicine and Sundry Houses, and direct from the Maker in Tins, 6d., 9d., 1s., 1s. 6d., and 2s. Write for terms to

EDWARD MAWER,

Chemist,
HIGH WYCOMBE, BUCKS.

Handbills and Show Cards supplied gratis.

Sold by Chemists every where.



ESTABLISHED 1760.

Contains three times the strength of ordinary Breakfast Beverages.

ONCE TRIED ALWAYS USED.

The valuable properties of the Dandelion Root, recognised by eminent Physicians for many centuries, has now become an article of daily use.

Sold by all Chemists throughout the Kingdom in Tins at 1s. 6d., 1s., 9d., and 6d.—*Price Lists on application to the Manufacturers,*

PHILLIPS & SON,

CASTLE SQUARE, SWANSEA,
AND ARTHUR STREET WEST, LONDON BRIDGE,

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 JAS. WOOLLEY, SON & CO., Manchester.
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 COLONIAL AGENTS.—Melbourne, Adelaide, and Sydney—P. T. FALK; BLYTHE & CO. New Zealand, Nelson, Canterbury, Auckland—A. SCLANDERS & CO.; E. & A. ISAACS. Adelaide—F. H. FAULDING & CO. Cape, Algoa Bay, East London—L. DREYFUS.

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CHEMISTS' TEA AGENCY.

BROKEN-LEAF TEA, 1s. 8d. per lb.

A Money-saving Tea, absolutely pure, in half-pound packets 10d. The small leaf from fine India and China Teas, stronger, richer, and cheaper than any whole-leaf tea. Wholesale to Dealers and Sellers and Agents, 40 lbs. sent free to any railway station in the kingdom.—**WALKER & DALRYMPLE.** Warehouses—154 and 155 Whitechapel Road, London. P.O.O. payable at Head Office. Bankers—The National Provincial Bank of England. N.B.—Samples posted free.

MORGAN'S PATENT CRUCIBLES



HAVE RECEIVED AT EACH EXHIBITION the HIGHEST AWARD made for CRUCIBLES. The quality is uniform, withstanding the greatest heat without danger, and they never crack. Porous Battery Cells, &c., are manufactured by

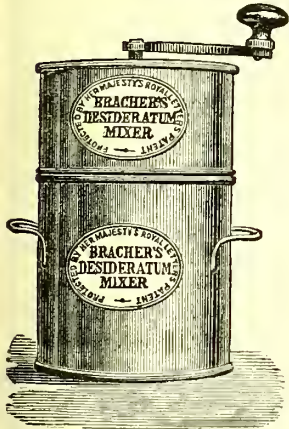
THE PATENT PLUMBAGO CRUCIBLE COMPANY,

BATTERSEA WORKS, LONDON, S.W.

TRADE MARK.

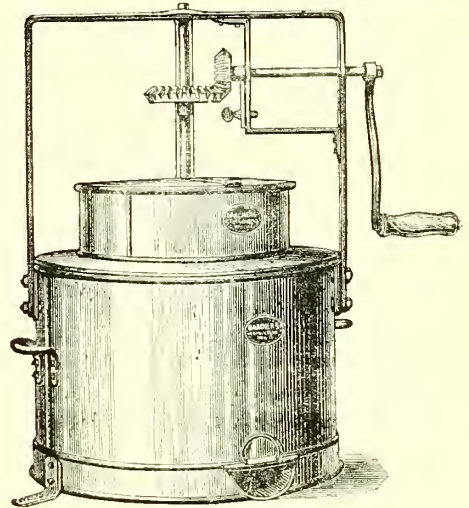
THE "DESIDERATUM" MIXING MACHINE.

BRACHER'S PATENT.



Nos. I. and II.

FOR
MIXING
ALL
Descriptions
OF
POWDERS.



Nos. V. and VI.

These Machines are admirably adapted for mixing all kinds of powders, heavy or light, in the shortest possible time, thereby *superceding to a great extent the use of the Pestle and Mortar*, and supply a long-felt want amongst Chemists and Druggists, Grocers, Confectioners, Drysalters, Colour Merchants, and Manufacturers.

They are durable, easily cleaned, portable, require no fixing (except in the case of large sizes), can be worked either *with or without* the cover, and are, without doubt, the best and cheapest Mixing Machines ever invented.

Every Retail Chemist and Druggist, Grocer and Confectioner, should possess one of these little Machines, as the small outlay would be soon repaid in the saving of time and trouble, indeed it would scarcely be thought possible that the articles could be so thoroughly blended in such an incredibly short time.

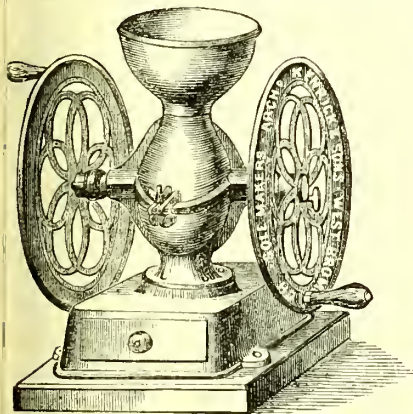
The Nos. 3, 4, and 4a are for mixing Baking Powder, Coffee and Chicory, Sherbet, Lemon Kali, &c., &c., and will blend from 1 lb. to 500 lbs. per hour. The large sizes are used by Wholesale Druggists, Confectioners, Drysalters, Sherbet and Lemon Kali Manufacturers, and all who have large quantities to mix.

See the CHEMIST AND DRUGGIST of March 15, 1879; also the GROCER AND OIL TRADE REVIEW of April 12, 1879.

Further particulars on application to the Manufacturer,

P. H. BRACHER, 77 HIGH STREET, WINCANTON.

AMERICAN DRUG & SPICE MILL.



Advantages—

The cutters or grinders never wear out. Cutters or Grinders can be cleaned and refixed in one minute, thus any quantity of different articles can be ground without fear of intermixture.

Price No. 4a Mill, 70/-	Price No. 2a Mill, 26/-
" " 3a " 50/-	" " 1a " 17/-
American Tincture Presses, 8/-, 12/-	

Larger size if required.

See PHARMACEUTICAL JOURNAL, November 17, 1877, page 399.

SOLE AGENT,

GEO. BURTON,
221, 223, 226, 232 St. John Street, Clerkenwell.

BEER IN BOTTLE.

WHITBREAD & CO.'S

LONDON COOPER, STOUTS, AND ALES.

For Prices and full Particulars apply to

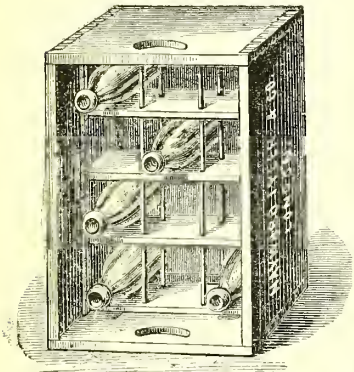
ROBERT BAKER, SOLE AGENT,
277 GRAY'S INN ROAD, KING'S CROSS, W.C.

Observe.—All Corks Branded "Whitbread & Co." Labels—Chocolate Letters on Orange Ground.

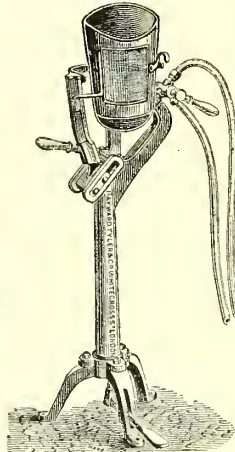
N.B.—It is very desirable that all orders should be sent on or before Saturday, 20th December, to lessen as much as possible the pressure of business that takes place previous to a General Holiday.

Hayward Tyler & Co.,

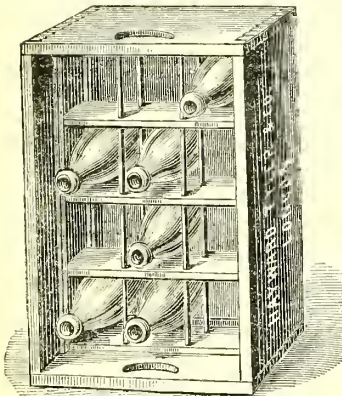
WHITECROSS STREET,
LONDON.



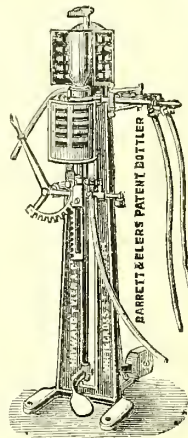
Wooden Cases for Patent Bottles.



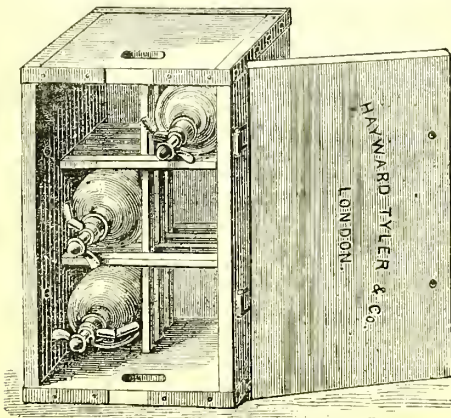
Syphon Filler.



Cases for Lemonade.



Bottling Machine.



WOODEN CASES FOR SYPHONS.

MILLS & CO.

BOURNE WATER,

THE PUREST IN ENGLAND.

MILLS & CO., Manufacturers of the Original BOURNE ARTESIAN AERATED WATERS.

BOURNE SODA WATER, unequalled for its natural Alkalinity.

BOURNE POTASH WATER—a Special Remedy for Rheumatism and Gout.

BOURNE LEMONADE—Superior Quality, made from the Fruit.

BOURNE AROMATIC GINGER ALE—a Fine Tonic.

BOURNE LITHIA WATER—Specific for the Gout. Guaranteed to contain a fixed quantity of Lithia.

BOURNE SELTZER WATER—The natural Alkalinity of the Bourne Artesian Well Water, combined with Artificial Salts, produces one of the best articles made. This Seltzer Water is well adapted for invalids for its purity.

When taken at dinner-time, it promotes digestion. Early in the morning, slightly aperient.

R. M. MILLS & CO., MANUFACTURERS, BOURNE. Messrs. Padgett & Son, Wine Merchants, 27 Motcombe Street, and Messrs. Hardy & Co., Chemists, 42 Fenchurch St., corner of Mincing Lane, Wholesale Agents, London. And their appointed Agents throughout the Kingdom.

J. H. CUFF'S MINERAL WATERS,

Atkinson St., Deansgate,
MANCHESTER.

ESTABLISHED IN 1801.

- | | |
|-----------------------------|----------------|
| SODA WATER (ordinary) | LEMONADE |
| SODA WATER B.P. | GINGER ALE |
| SELTZER WATER | GINGER BEER |
| LITHIA WATER | AERATED WATER |
| POTASS WATER | without alkali |
| 15 grs., 20 grs., & 30 grs. | QUININE TONIC |
| (each half-pint) | WATER |

LITHIA WITH POTASS WATER, &c., &c.,

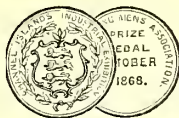
Supplied in ordinary and half-sized bottles and in syphons.

Cuff's Waters are prepared expressly for a High-class Family Trade.

PRICES MOST REASONABLE.
LIST FREE ON APPLICATION.

CARRIAGE PAID ON FULL GOODS
AND RETURNED EMPTIES.

PATENT SODA WATER BOTTLES.



BARRETT & ELMERS,

9 DACRE STREET, WESTMINSTER, LONDON, S.W.

We are bringing out some

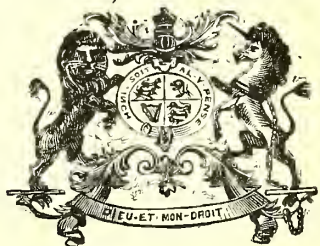
By Royal Letters Patent, Dated June 2, 1874, No. 1923.

NEW BOTTLES AND STOPPERS

FOR THE APPROACHING SEASON, MUCH CHEAPER,

And with great Improvements on existing Patents.

Before giving your orders, please write for samples.



BARRETT & ELMERS' FILLING MACHINES & SYRUP PUMP COMBINED

Have been proved to be The Best and Cheapest in the Market, of which now upwards of 1,000 have been Sold.

IMPORTANT NOTICE.

Should the Bottles break, the Stoppers may be newly fitted up and used again in fresh Bottles, thereby being a saving and advantage over some other Patents.



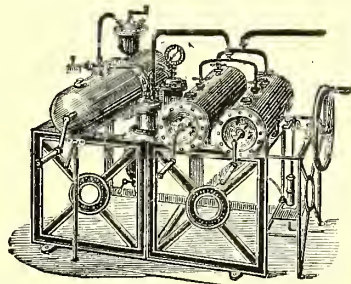
GOLD MEDAL SODA WATER MACHINERY.

Awarded Grand Medal of Progress at Vienna, 1873.



Seven First-class Medals awarded at various International Exhibitions over and above all other Machinery of the kind since 1862.

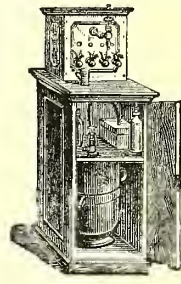
Soda Water made at a minimum cost by using these Machines. No Steam Power wanted. Entire Saving of Coals. Half the usual Labour. Saves Breakage of Bottles. Simple in Construction.



TRADE MARK. Generator and Bottling Cylinders.

Agents for Lamont's Patent Bottles, and Vaass & Littman's Ice Making Machines.

Sole Agents for Galloway's "Excelsior" Soda Water Machine, with Steam Engine combined, and "Universal" Double Pump Machine, Guaranteed to Make 40,000 Bottles per Day; also all other Specialities made by this celebrated House.



Cabinet Machine.

Cost of Machines Saved in one Season in Broken Bottles alone.

The undersigned are the only Manufacturers in Europe of the Improved Machines for Making, Bottling, and Drawing on Draught Aërated or Mineral Waters.

These Machines are lined with pure tin, the pipes are of pure tin, and every care is taken to make them as perfect as possible. For convenience, and saving of time and labour, these Machines are not excelled; therefore, for Makers of Soda Water, Lemonade, Ginger Ale, Seltzer, Potass, Vichy, and other Waters, they are invaluable.

Before purchasing send for Catalogue of 104 pages, post free, giving illustrations and prices.

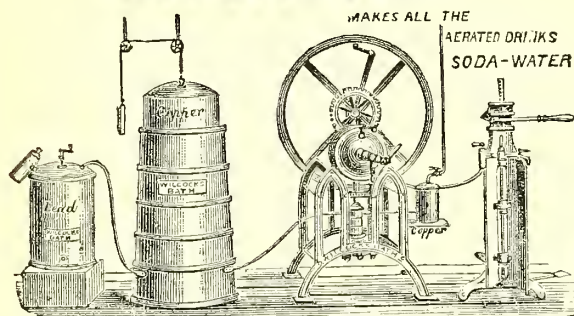
NOTICE.—The Trade and all others are notified that no one has authority from us to manufacture any of our specialities; and anyone pretending to have such, and manufacturing the same, will be dealt with according to law. All are therefore safe only by dealing with the original Inventors and Manufacturers.

DOWS, CLARK & Co., 46 & 47 Frith Street, Soho, LONDON.

In our New Catalogue, just issued, will be found illustrations and descriptions of the various Machines for Making Aërated Waters and Bottling the same, Marble Machines for the Counter, of various designs and prices, Copper Cylinders and Coolers, Syphons and Fillers, Ice Safes, Silver-plated Counter Draught Tubes, Tumblers, and Silver-plated Holders, Measuring Taps, Ice Cream Freezers, Fruit Juices, Extracts for flavouring, and Fruit Syrups, for Export or otherwise. Patent Clasps for Bottles, Pressure Gauges, the Cabinet Machine for Clubs, Private Families, Messes, &c. Mineral Waters for Export. Bottles, Corks, Ginger Ale Extract, Gum Extract, for producing foam, Cider Extract, &c., &c.

Lime Juice Cordial and Syrup of the very finest quality.

COMPARE



WITH OTHER MAKERS.

N. G. WILCOCKS

ESTABLISHED

N. G. WILCOCKS' SODA WATER & LEMONADE MACHINES.

THE Opinions and Testimonials which have been published must convince everyone that Wilcocks' Machinery is quite satisfactory. Hundreds of factories are fitted or supplied with these Machines, and testimonials extending over many years are so numerous that though several hundreds have been printed, a very much larger number has been received.

N. G. WILCOCKS has had a long practical experience, and gives his undivided attention to this branch of his business. Every portion of the Machines he makes has had his most diligent study for years past, and his inventions and designs have been approved and used by some of the most eminent Aërated Water Makers in the kingdom. All his customers, British or foreign, may be assured of his personal attention to their orders.

All Wilcocks' Machines are made on the continuous process direct-action Bramah principle; the solid plunger works through the bottom of the pump in a ring or collar of cupped leather; the valve body is at the top of the pump. Constant and energetic endeavours have been given to make these Machines the most perfect in existence, and these endeavours have been successful. Mr. Wilcocks can introduce his customers to factories where they can see his Machines in full and profitable operation, and so have an opportunity of judging for themselves.

Wilcocks' "Favourite" Machine is really the favourite among makers; most intending manufacturers purchase one of the four sizes in which it is made. The full-sized Machine, with dial and water gauges, and gas work, as exhibited at the recent Mineral Water Trade Exhibition, Agricultural Hall, London, sells at £42 10s. Hundreds of these have been sold during the last few years, and they are generally esteemed first-class moderate priced Machines.

Wilcocks' Bottling Apparatus is the result of prolonged study; it is the simplest in use, and is consequently the most

easily repaired, while it is quite as efficient as the most expensive.

The "Eclipse Filling Machine," at £4 10s., can be so confidently recommended that the money will be returned in any case where it fails to give satisfaction. It is hoped that its very low price will not raise a prejudice against it.

A simple contrivance for Syruping has just been perfected by Mr. Wilcocks, and particulars will appear in future announcements.

His Soda Water Machine makes 200 dozen bottles a day with hand power; more can be turned out if a small motor, such as a steam, air, or water engine, be employed. Any filling apparatus, patent or not, for patent or corked bottles can be attached to this machine.

Mr. Wilcocks has very complete plant, tools, and stock, and employs a staff of highly skilled and experienced workmen. Every part of his machines is made by his own workmen from the best materials. The copper gun-metal and English tin are of the best obtainable quality; sound, well-seasoned oak is used for the cooperage.

By thus making even the earliest stages of the machines, all intermediate profits are avoided, and the quality of the material and the soundness, accuracy, and finish of the workmanship can be guaranteed. Every machine is carefully tested by actual use before it is sent out. Although Wilcocks' Machinery is low in price, it is confidently claimed that it will be found equal in every respect to the best in the market.

Every process of manufacture can be seen in active operation at Bath.

Mr. Wilcocks has had long experience, not only in machines, but in every other requirement of the Aërated Water Trade, and he is prepared to supply formulæ for bottled drinks, full directions for manufacture, plans and estimates for complete factories, and all information necessary to ensure success in this lucrative business.

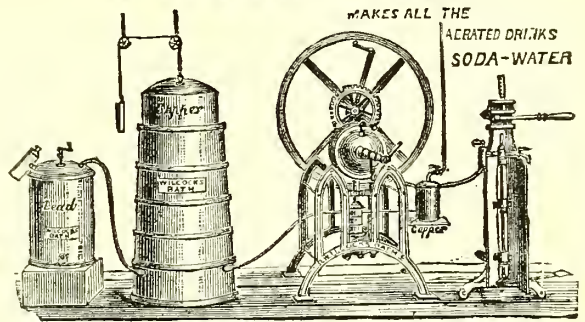
ALL ORDERS ARE PROMPTLY EXECUTED.

Address,

N. G. WILCOCKS, SODA WATER MACHINIST, BATH.

WILCOCK'S

COMPARE



IN 1800.

WITH OTHER MAKERS.

THE ECLIPSE FILLING MACHINE,

TO FILL PATENT BOTTLES.

£4:10:0.

Will fill Codd's, Lamont's, Barrett & Elers',
AND OTHER PATENT STOPPER BOTTLES.

All the Patent Bottles brought to Wilcocks' Stand at the MINERAL WATER TRADES SHOW, in October last, were filled with this Machine, in the presence of the Mineral Water Makers.

COMPARE

The following Prices with those of other Makers.

A full-size Machine, to make 200 dozen per day by hand power	{ Dial Pressure and Water Gaug- and Bottling Rack are included with each. }	£50 0 0
A small Machine, to make 100 dozen per day by hand power		£40 0 0
A smaller Machine, to make 60 dozen per day by hand power		£30 0 0
Wiring Stand or Tying Stool		£1 10 0
Bottle-Washing Apparatus for Power		£1 5 0

A printed Book of Testimonials and opinions from buyers and users of N. G. W.'s make Soda Water Machine Engines and Boilers, also new Illustrated Descriptive Catalogue, sent post free to any part of the globe upon application.

A number of the above Machines can be seen in different stages of progress at this Manufactory. Inspection, and a visit from an intending purchaser, is invited to examine the weight, strength, size, capacity, quality, finish, and price in this Machine, and the testimonials from large numbers to whom this Machine has been supplied in years past. If required, a written guarantee is given to a purchaser with each Machine.

A complete Machine, with Vertical Boiler and Horizontal Steam Engine, to make 300 dozen per day, with all Mountings £91 10 0

A complete Machine, with Vertical Boiler and Horizontal Steam Engine, to make 2,000 dozen per day, with all Mountings, ready for work . . . £150 10 0

NATHANIEL GEORGE WILCOCKS, ENGINEER, BATH.

HUNYADI JÁNOS APERIENT WATER.

CAUTION.

Circumstances which have come to the knowledge of Andreas Saxlehner, Buda Pest, Sole Proprietor of the Hunyadi János Spring, compel him to warn the British Public against SPURIOUS IMITATIONS. To secure genuineness, purchasers should see that every bottle has on the LABEL the name of "THE APOLLINARIS COMPANY (LIMITED), London."

MONDOLLOT & CO., Limited.

BEFORE PURCHASING YOUR

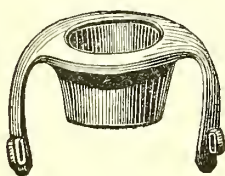
SODA WATER MACHINERY

Write for Mondolot's CATALOGUE, which will be sent post free on application.

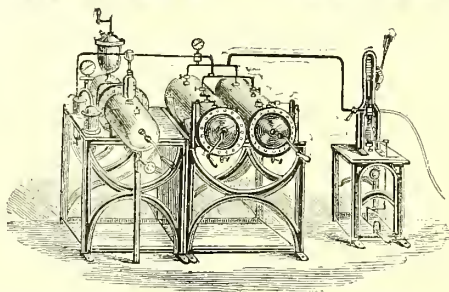
13 LITTLE JAMES STREET, BEDFORD ROW, LONDON, W.C.

SODA-WATER MACHINERY.

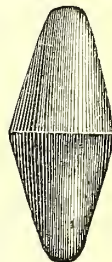
PATENT NOZZLE



FITS ANY BOTTLE.



CONE STOPPER.



BALL STOPPER.



SODA WATER MACHINE COMPLETE, WITH RACK.

DAVENPORT'S NOZZLE AND STOPPER is the best Patent for utilising old Bottles, and converting them into Patents. No Corks or Wire, and saving entire cost in one season. The New Nickel-plated Nozzle makes this the most attractive Patent in use. Trial allowed. Prices lowered. Send for Samples. New Bottles ready fitted for use now supplied.

Catalogues of Soda-Water Machines, Ice-Making Machines, Engines, Boilers, Copper Cylinders, Syphons, Seltzogenes, Filters, &c., and all accessories to the Soda-Water Trade.

AGENTS FOR HAYWARD TYLER & CO.'S SODA-WATER MACHINERY.

” ” BARRETT & ELSERS' Patent Stoppers in Lamont's Bottles.

Illustrated Catalogues, of sixty-four pages, post free to all parts of the World.

DAVENPORT & CO., Soda-Water Machinists and General Machinery Agents,
99^N HIGH HOLBORN, LONDON.



LONDON, 1862.



LONDON, 1873-74.



PARIS, 1867-78.



VIENNA, 1873.



PHILADELPHIA, 1876.



CAPE, 1877.

SODA WATER MACHINERY,

And all accessories connected with the business.

HANDSOME MARBLE COUNTER FOUNTAINS,

For dispensing Iced Fruit Drinks.

MACHINES FROM 30 POUNDS.

Sole Agents for Codd's Patent Globe-Stoppered Soda Water Bottles.

In use by over 500 established Soda Water Makers in England alone.

SOLE MAKERS OF THE IMPROVED LONDON-MADE SYPHON, 2s. each in quantities.

CATALOGUE FORWARDED FREE.



THE "LONDON-MADE" SYPHON.

BARNETT & FOSTER, 23^T Forston Street, Shepherdess Walk, City Road, London, N.

TO THE MINERAL WATER TRADE.

DISCS FOR ALL PATENT BOTTLES.

These are a great convenience, strengthening the Cap Labels, and keeping the lips of the Bottles free from dirt. The following sorts are kept in stock:—

"PLAIN" DISCS,

Size of this Circle, on Stout Boards, no Printing.

Price—5,000, 8d.; 10,000, 7d.; 25,000, 6d.; 50,000, 5d.; 100,000, 4d. per 1,000.



"GROTESQUE" DISCS,

Printed on good Cardboard in Blue Ink; they consist of a great variety of Amusing Figures.

Price—5,000, 1s.; 10,000, 11d.; 25,000, 10d.; 50,000, 9d.; 100,000, 8d. per 1,000.



"MOTTO" DISCS,

Printed on Stout Boards in Black Ink; they consist of an immense variety of Mottoes and Well-known Sayings.

Price—5,000, 9d.; 10,000, 8d.; 25,000, 7d.; 50,000, 6d.; 100,000, 5d. per 1,000.



"QUOTATION" DISCS,

Printed on good Cardboard, Lake Ink; they consist of an immense number of Quotations from Shakespeare, Byron, Milton, Burns, &c., &c.

Price—5,000, 1s.; 10,000, 11d.; 25,000, 10d.; 50,000, 9d.; 100,000, 8d. per 1,000.



All the above are assorted in Boxes of 5,000, each Box containing an immense assortment. Prices and Samples submitted for all kinds of Labels, and also for Show Cards, Circulars, Price Lists, and all printed matter required in the business.

J. B. LAMBE & CO.,

PRINTERS TO THE MINERAL WATER TRADE,

199 UPPER THAMES STREET, LONDON, E.C.

VALLET'S PATENT.



Fig. 1.

The Stoppers are made in six different sizes—Nos. 1, 2, 3, 4, 5, and 6. Nos. 4, 5, and 6 are most suitable for general use, the Bottles adapted to which having sufficient capacity in the mouth to allow a copious flow of the liquid, whilst Nos. 1, 2, and 3 are specially made for Bottles which have only a small mouth, thus retarding the flow of the liquid, and causing the evaporation of the carbonic acid gas before the Bottle can be emptied.



Fig. 3.

ROYALTY FREE.

All Communications to be addressed to

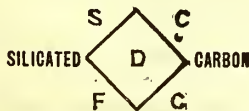
L. VALLET, 49 Everton Road, LIVERPOOL.



FIG. 2.—THE STOPPERED AND FITTED BOTTLE.

New Stopper.

SILICATED CARBON FILTERS.



Prize Medals—PARIS, 1867. HAVRE, 1869.

ADOPTED, IN PREFERENCE TO ALL OTHERS, by the Admiralty, and used in the General Post Office, the London and Provincial Hospitals, and many Public Establishments in various parts of the World.

SILICATED CARBON FILTER COMPANY, CHURCH ROAD, BATTERSEA, LONDON.

RANDALL'S BLACK CURRANT LOZENGES.


	Net Cash.	To Acct.
	s. d.	s. d.
Plain Black Currant, old square ..	2 6	2 8
" " " rough oval ..	2 6	2 8
Black Currant and Ipecacuanha ..	2 6	2 8
Black Currant and Tannin ..	3 0	3 3
Black Currant Voice (warm astringent) ..	3 0	3 3
Black Currant Cough Lozenges ..	3 6	3 10

(Ipecac. and Morph., strength as "B. P.")
In Bottles, 1 lb., 2 lbs., 4 lbs., and 7 lbs. For Exportation, in soldered tins, of any size. From EDWARDS, London; through any Wholesale House; and from the Manufacturers.

RANDALL & SON, Southampton,

Who will forward Samples by post on application. Also, BROWN COUGH LOZENGES, 2s., 2s. 2d.; 7 lbs. stamped with name free. N.B.—Medical Lozenges of every kind, including those of the Pharmacopoeia of the Hospital for Diseases of the Throat, London.


IMPORTANT DESIDERATA ARE SUPPLIED IN



LIME JUICE

N.B.—
Exceedingly hand-
some Show-Cards, together
with Handbills of a most ex-
ceptionally respectable character, are
supplied to purchasers of these
professionally recommended
preparations.

LIME JUICE




WENHAM'S

CHALYBEATE

The only
Effervescent Salines
which do not exert a
physiological action upon the blood;
the converse of Lime Juice,
or fruit of any kind
whatsoever.

SALINE.



In BOTTLES, 2s. 6d. and 4s. 6d. each; CASES, 21s. SOLE MANUFACTURERS (REGISTERED),

WHEELER & CO., LONDON, and SOUTHBEND-ON-SEA.

"Messrs. WHEELER & Co. have produced a REMARKABLY HANDSOME SHOW-CARD, representing a package of WENHAM'S LIME-JUICE SALINE, on a gold ground, with a border of lime fruit and blossom."—CHEMIST AND DRUGGIST, Trade Notes, July, 1879.

LAMPLOUGH'S EFFERVESCING PYRETIC SALINE.

HAVE IT IN YOUR HOUSES AND TRAVELS, USING NO OTHER SALINE;
It gives instant relief in Headaches, Sea or Bilious Sickness, and quickly cures the worst form of Eruptive or Skin Complaints. The various diseases arising from Constipation, the Liver, or Blood Impurities, Inoculation, the results of breathing air infected with Fevers, Measles, or Smallpox, are frequently prevented and certainly cured by its use.

The sale of these Saline Salts having greatly increased during the past few years, I beg most cordially to thank those who sell and recommend the same, and also to inform intending dealers that they will find Messrs. BARCLAY, EDWARDS, MAW, NEWBERRY, SANGER, SUTTON, and the Wholesale Houses generally, ready to supply their wants. This Advertisement is found needful in consequence of the trouble, cost, and inconvenience in the keeping and collection of numerous small accounts. Note.—The Name, Trade Mark, Labels, Wrappers, &c., are all Registered and Entered at Stationers' Hall.

113 HOLBORN HILL, LONDON, E.C.

SPECIAL NOTICE.—Medical Gentlemen having fever cases, and desirous of trying the Saline, can have a single bottle at wholesale prices by sending their cards.

PARNELL'S CHALYBEATE SALINE.

An Agreeable Cooling Febrifuge and Tonic Aperient Effervescent Salt, being a Chalybeate Water in a solid form.

ANALYTICAL REPORT BY DR. T. REDWOOD.

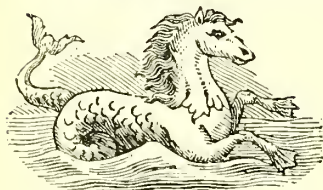
As the result of a careful analysis I am enabled to state that Parnell's Chalybeate Saline is what it purports to be, a mild Chalybeate and tonic, possessing aperient and alterative properties to a sufficient extent to render it an efficient, and as I believe, a valuable medicine. The ingredients are judiciously combined so as to yield, when mixed with water, an agreeable effervescent draught.

T. REDWOOD, Ph.D., F.I.C., F.C.S.,
Professor of Chemistry and Pharmacy to the Pharmaceutical Society of Great Britain.

To be obtained in Bottles, 2s. 6d., from SANGER & CO., NEWBERRY & SON, and all Wholesale and Retail Chemists, and from

26 BUCKINGHAM PALACE ROAD, S.W.

Show Cards and Handbills sent free on application. Paris Agent—M. SWANN, Rue Castiglione.



REGISTERED TRADE MARK.

EUGENE GERAUT & CO.

NEW PATENT LEVER SELTZOGENES.

For the immediate production of Eau de Vichy, Soda Water, Sparkling Lemonade, Aerated Waters.

First introduced by EUGENE GERAUT & Co. in 1853.

3-pint, wire, 13/; 5-pint, wire, 18/; 8-pint, wire, 30/.
Cane covered, 3-pint, 6d.; 5-pint, 1/; 8-pint, 2/ each extra.
Strongly silver-plated top, 5/ each extra. 3-pint size, strongly silver-plated, richly decorated porcelain stands, 30/ each; 5-pint size, ditto, ditto, 38/ each; 8-pint size, ditto, ditto, 48/ each.

Our well-known Seltzogenes are improved yearly, and have already stood a public test of upwards of Twenty Years, and are acknowledged as THE VERY BEST.

POWDERS FOR THE ABOVE.—Subject—3-pint, per dozen boxes, 22/; 5-pint, ditto, 36/; 8-pint, ditto, 63/.

LIBERAL DISCOUNT FOR LARGE QUANTITIES.

1 & 2 CORPORATION BUILDINGS, FARRINGTON ROAD, LONDON, E.C.

SYPHONS.

IMPORTANT NOTICE.
Great Reduction in Price.

Clear or coloured glass, pure ENGLISH BLOCK TIN TOPS, with piston or cap.

22/6 per dozen, for quantities of not less than one gross.

25/ per dozen, for less than one gross.

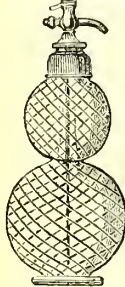
Packing in Cask, 5/ per gross.

The Name marked on the metals free of charge for quantities of not less than one gross.

The Name engraved on the glass, 2d. each extra.



1878.



1873.



1870.



Natural Mineral Waters of "Apollinaris," "Hunyadi Janos," Vals, Vichy, Carlsbad, Seltzer, Kissingen, Homburg, Pullna, Friedrichshall, &c., direct from the Springs.

Also the ARTIFICIAL MINERAL WATERS prepared by Dr. STRUVE & CO., at the Royal German Spa, Brighton, and R. ELLIS & SON, Ruthin.

Appointed Agents for the celebrated "APOLLINARIS WATER."

W. BEST & SONS, Foreign Wine, Spirit, and Mineral Water Merchants, 22 Henrietta Street, Cavendish Square, London, W.

NEW AND IMPORTANT DISCOVERY.

GINGER ALE,

FROM PURE JAMAICA GINGER.

The difficulty of using Ginger in the manufacture of "Ginger Ale," and at the same time having a CLEAR and SPARKLING DRINK, has, after much labour and expense, been thoroughly overcome by

Messrs. HARSTON & CO., of LEEDS,

and they are now able to place before the public a BRIGHT and SPARKLING DRINK, made purely from genuine Ginger Root.

TRADE MARK.



TRADE MARK.

Registered Label.

[Registered Label.]

HARSTON & CO.'S

GINGER ALE,

from Pure Jamaica Ginger.
Carries a beautiful creamy head.

HARSTON & CO.'S

GINGER ALE,

from Pure Jamaica Ginger.
Wholesome and Refreshing.

HARSTON & CO.'S

GINGER ALE,

from Pure Jamaica Ginger.
A safe Drink for Ball-room or Cricket-field.

HARSTON & CO.'S

GINGER ALE,

from Pure Jamaica Ginger.
For railway travelling; driving, or exposure to cold.

HARSTON & CO.'S

GINGER ALE,

from Pure Jamaica Ginger.
Has wonderful nourishing properties.

HARSTON & CO.'S

GINGER ALE,

from Pure Jamaica Ginger.
Restores Circulation; is Warming and Comforting.

HARSTON & CO.'S

GINGER ALE,

from Pure Jamaica Ginger.
Is Non-Intoxicating.

HARSTON & CO.'S

GINGER ALE,

from Pure Jamaica Ginger.

Recommended by the Medical Profession for Consumptive Patients.

FOREIGN MINERAL WATERS.

FOREIGN LIQUEURS.

FOREIGN WINES.

FOREIGN SPIRITS OF EVERY DESCRIPTION.

ANGOSTURA BITTERS.

APPLY TO

JAMES SMITH & COMPANY, IMPORTERS,
LIVERPOOL: 9 LORD STREET.

Caution

W. A. ROSS, the Original Patentee and Maker of
The Celebrated Belfast Ginger Ale, cautions
the Public that the "GENUINE" can only be had at

Ross's Royal Ginger Ale
AND
Aerated Water Works Belfast.

NAME ON CORK, CAPSULE, AND LABEL REGISTERED.

EXPORT ORDERS HAVE SPECIAL ATTENTION.

RANDALL, SLOPER & CO.,
SODA WATER MANUFACTURERS,
SOUTHAMPTON.

GOODS FORWARDED CARRIAGE PAID WITHIN 80 MILES OF
SOUTHAMPTON, ON ORDERS OF 2 GROSS AND UPWARDS.

Soda, Seltzer, Potash & Aerated Waters
supplied in Syphon Bottles.

Importers of Hunyadi János, Friedrichshall, Vichy,
Pullna, Carlsbad, and other Foreign Mineral Waters,
supplied at Prices which will bear comparison with
London Rates.

PRICE LISTS FORWARDED ON APPLICATION.

THE LEAMINGTON

APNEUMATIC



MINERAL WATERS

Apneumatic Soda Water.
Apneumatic Brighton Seltzer.
Apneumatic Potass Water.

Apneumatic Lithia Water.
Apneumatic Aerated Water.
Lemonade.

GINGER ALE (Aromatic). GINGER ALE (Aromatic).

GUARANTEED FREE FROM ALL IMPURITIES.

Our terms are more favourable for a family trade than those of any first-class makers.

KINMOND & CO., LATE J. DAILY & CO., LEAMINGTON.

Trade List and Descriptive Pamphlet of the Apneumatic process free on application.

PURE AERATED WATERS.

MANUFACTURED BY

T. & F. J. TAYLOR, NEWPORT PAGNELL.

ESTABLISHED 1835.

Purity and Excellence of the Water certified by Analysis by
PROFESSOR ATTFIELD, Ph.D., F.C.S.

NEWPORT PAGNELL SODA WATER, containing
10 grains of Bicarbonate of Soda in each bottle.

AERATED WATER, without Alkali.

POTASH WATER, containing 10 grains or 20 grains of
Bicarbonate of Potash in each bottle.

LITHIA AND POTASH WATER.

SELTZER WATER, prepared according to Analysis of the
Natural Water.

EFFERVESCING LEMONADE, superior in flavour
colourless, and warranted to retain its brilliancy.

Each Bottle is protected by a Label bearing the Signature of the Firm

"ABSOLUTELY PURE."

SEE ANALYSES. Sent post free on application.

ELLIS'S



REGISTERED.

CORKS BRANDED "R. ELLIS & SON, RUTHIN," and every
label bears their Trade Mark. Sold everywhere, and wholesale of

R. ELLIS & SON, RUTHIN, NORTH WALES.

London Agents: W. BEST & SONS, Henrietta St., Cavendish Square.

RUTHIN

WATERS.

Soda, Potass,
Seltzer, Lemon-
ade, also Water
without Alkali.
For GOUT,
Lithia Water, &
Lithia &
Potass Water.

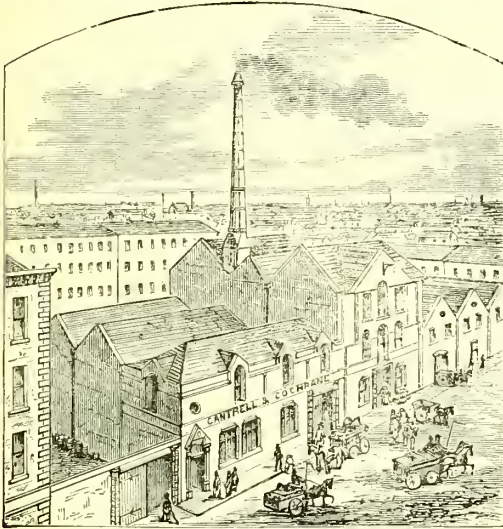
CANTRELL & COCHRANE,

ORIGINAL MAKERS OF THE JUSTLY CELEBRATED

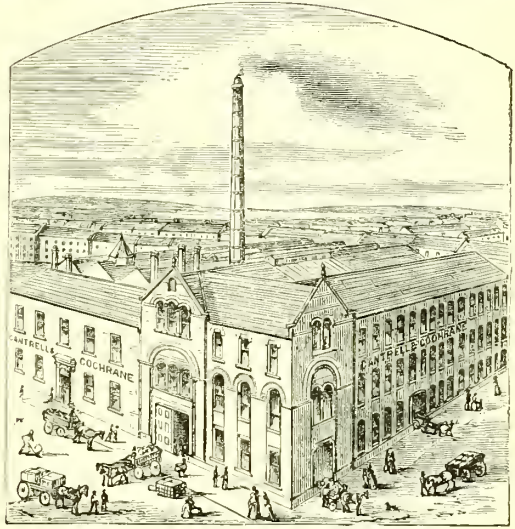
AROMATIC GINGER ALE.

ALL OUR DRINKS ARE NON-ALCOHOLIC.

ALL OUR DRINKS ARE NON-ALCOHOLIC.



WORKS, NASSAU PLACE, DUBLIN.



WORKS, CROMAC BUILDING, BELFAST.

MAKERS BY APPOINTMENT TO HIS EXCELLENCY THE LORD LIEUTENANT OF IRELAND.

CONTRACTORS FOR THE

Abyssinian Expedition.
Inman Steam Ship Company.
Oceanic Steam Ship Company.

Anchor Steam Ship Company.
Montreal Steam Ship Company.
Pacific Steam Ship Company.

Cunard Steam Ship Company.
National Steam Ship Company.
Kingston and Holyhead Royal Mail.

The following List of their preparations is worthy of the attention of Chemists:—

AROMATIC GINGER ALE.

Kali, or Potass Water.
Soda Water.
Seltzer Water.
Lithia Water.

Lemonade.
Summer Beverage.
Lime Juice.
Lime Juice Syrup.

Aerated Sarsaparilla.
„ Dandelion.
„ Quinine.
Carrara Water.

“**MONTERRAT**” **LIME JUICE CHAMPAGNE (Aerated).**

The Machinery and Appliances used in the Laboratory and Factory for their production are of the most approved construction; the Water and all the Materials used are of the highest degree of purity; and as the greatest care is exercised in their manufacture, they may be relied on as absolutely free from organic and mineral contamination.

Testimonials from the MEDICAL PROFESSION, from accomplished ANALYSTS, and from PUBLIC MEN eminent in Literature, Science, and Art, at once give an assurance of the excellence of these Beverages, and show the universal esteem in which they are held.

INTERNATIONAL RECOGNITION has been given to their merits at various Exhibitions all over the World. Eight Gold and Prize Medals have been awarded.

All Goods ordered for Export are specially prepared and packed for their respective destinations, and are guaranteed to retain their qualities unimpaired. Terms and Prices may be obtained on application to—

CANTRELL & COCHRANE,

Nassau Place, Cromac Building, 14 & 16 Union Street, or, 53 Surrey Street,
DUBLIN. BELFAST. EDINBURGH. GLASGOW.

PURVEYORS TO HER MAJESTY'S IMPERIAL HOUSES OF PARLIAMENT.

GENUINE BRIGHTON SELTZER AND OTHER AERATED WATERS,

Prepared with scrupulous care as to chemical accuracy, and with the Natural Spring Water of Brighton, the Purest in the Kingdom.

JOHN CHALLONER & SONS, MINERAL WATER MANUFACTURERS, PROVIDENCE PLACE, BRIGHTON.



See our Advertisement, May Edition.

FOREIGN MINERAL WATERS.

FREDERICKSHALL (5 Cases, 6/6, per Case less) 24/6 Case, 30 bot. ... 34/ Case, 60 1-bot	APOLLINARIS (24 Hprs., 1/- per Hpr. less) ... 25/ Hpr., 50 ... 39/ Hpr., 100 "
Stoppers free, carriage paid; Empty Bottles, 6d. per dozen.	
HUNYADI JANOS (10 Cases, 1/2-bts., 5/- less; 10 Cases, bts., 3/- each less)	30/- Case, 25 bts. ... 50/- Case, 50 1-bts.
SELTZER	11/6 Hpr., 25 ... 15/6 Hpr., 50
PULNA	18/- Case, 20 ... 30/- Case, 50
VICHY	31/- " 50 " ... 37/- " 50 "
CARLSBAD	37/6 " 50 "
KISSENGEN	45/- " 50 "
S. HWALLBACH	27/6 " 50 "
HOMBURG	37/6 " 50 "
WILDUNGEN	40/- " 50 "
CARLSBAD SALTS, 1/2-Bots. 21/- per doz.; 1/2-Bots., 41/- per doz.; Bots., 80/- per doz.	

FINE NORWEGIAN BLOCK ICE.

ORIGINAL BLOCKS, 2 to 3 cwt., each 2/5 per cwt.
1 cwt. to 2 cwt. ... 3d. per lb. 1 Under 1 cwt. ... 1d. per lb.
Packing and Mats for Original Blocks free; 3d. each allowed for Mats if returned in good condition.

PRINTED DIRECTIONS for STORING ICE sent free on application.

W. B. HARRISON Importer of Ice & Mineral Waters, 6 BRIDGE STREET, SUNDERLAND.

G. COLE, PACKING CASE MAKER.

Boxes and Cases supplied to

MINERAL WATER MANUFACTURERS

Using Patent or Ordinary Bottles.

632 ROTHERHITHE ST. (late Trinity St.), ROTHERHITHE, S.E.

JEWSBURY & BROWN'S MANCHESTER MINERAL WATERS,

PURE SODA, SELTZER, POTASH, LITHIA, &c, LEMONADE, GINGER ALE, AND QUININE TONIC.

Prepared and Bottled specially for Export, and warranted to keep well.

Manufactured with the utmost care and by improved machinery, these productions are recommended for **purity and excellence of quality** by many leading members of the Medical Profession, and have for many years had a preference by the public; the flavour of the **Lemonade and Ginger Ale** being procured from the **fresh Fruit and Finest Jamaica Ginger**, they may be relied upon as furnishing delicious and satisfactory beverages, either for general use or specially for invalids.

The **Soda Water** is absolutely free from any metallic impregnation, and being by improved machinery highly charged with Carbonic Acid Gas, and each bottle containing a definite and unvarying proportion of **Pure Carbonate of Soda**, J. & B. have every confidence in inviting a trial from those who have not already patronised them.

The **Seltzer, Potash, and Lithia Waters** are prepared with the utmost exactitude and the purest ingredients.

The **New Quinine Tonic** furnishes a pleasant form for the administration of a most valuable restorative, and is refreshing and agreeable.

Ginger Ale (Aromatic) of superior quality, and strongly recommended as a Non-Alcoholic and warm stimulant beverage.

N.B—Every Bottle is protected by a distinctive Label, with Name and Trade Mark, and each Cork is branded.

Counter Bills and Analytical Reports, with Agents' Names and Addresses, supplied when requested.

JEWSBURY & BROWN, 44 Downing Street, 3 Grosvenor Street, and 113 Market Street, MANCHESTER.

A CERTIFICATE OF MERIT, for superiority of quality, was awarded to Jewsbury & Brown at the Exhibition of Sanitary Appliances, at Owens College, Manchester, on the occasion of the Meeting of the British Medical Association, August, 1877.

A CERTIFICATE OF MERIT awarded by the British Sanitary Institute of Great Britain, after a deferred PRACTICAL TRIAL AND EXAMINATION, July 4th, 1879.

HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER

(GUARANTEED PURE AND FREE FROM CAPSICUM).



This highly concentrated Essence is the purest Jamaica Ginger flavour and aroma, is highly adapted for the manufacture of Aërated Waters, and for all dietetic, medicinal, and pharmaceutical purposes.

THE COST of this Essence in the manufacture of Ginger Beer, &c., is a little under 2½d. per dozen bottles. Dose, 10 or 15 drops to half-a-teaspoonful in water.

Trade Price, 5s. per lb.

THE COMPOUND ESSENCE

(GUARANTEED PURE AND FREE FROM CAPSICUM).

Trade Price, 5s. 6d. per lb.

This Essence, which is an addition of *Vanilla*, *Lemon*, and *other flavours* to the above, is strongly recommended for the manufacture of Ginger Beer, Wines, &c., to which it imparts with the GINGER a PECULIARLY FINE FRUITY FLAVOUR and AROMA. THE COST of this Essence in the manufacture of Ginger Beer, &c., is a little under 3d. per dozen bottles.

THE COMPOUND FORTIFIED ESSENCE

Specially adapted for the Manufacture of

GINGER ALE.

Trade Price, 5s. 6d. per lb.

THIS ESSENCE, besides its special adaptation as above, is strongly recommended for the manufacture of GINGER BEER and other kinds of Aërated Beverages, especially in those cases where it is desired to impart to those drinks at a SMALL COST the FULLEST amount of PUNGENCY with the FINE GINGER AROMA and FRUITY FLAVOURS of the LAST-MENTIONED ESSENCE.

THE COST of this Essence in the manufacture of GINGER ALE is 1½d. per dozen bottles, and for GINGER BEER or GINGERADE a little under 1½d. per dozen bottles.

MEDICAL AND OTHER OPINIONS ON THE SOLUBLE ESSENCE.

"Singularly free from resin."—*The Lancet*.

"It should entirely supersede the official preparation of the British Pharmacopœia."—*Medical Press*.

"It is a pure, elegant preparation, and is free from resinous matter."—*Medical Times and Gazette*.

"It is a pharmaceutical desideratum."—*The Chemist and Druggist*.

MEDICAL AND OTHER OPINIONS ON THE GINGER BEER MADE FROM THE SOLUBLE ESSENCE

"An excellent effervescing drink."—*The Lancet*.

"Extremely grateful and palatable, and certainly preferable to some wines we have tasted under the name of champagne."—*Medical Press*.

"Clear and transparent, and very pleasing to the palate."—*Medical Times and Gazette*.

"Has the purest Jamaica Ginger aroma, distinguishable as soon as poured out. It is a beverage fit for any gentleman's table, and ought to attain great popularity."—*The Chemist and Druggist*.

"Is as clear, bright, and sparkling as the best Lemonade."—*Mineral Water Trade Review*.

"Stands in the foremost rank of Aërated Waters."—*Mineral Water Trade Recorder*.

GINGER ALE EXTRACT

Supplies all Colouring and Flavouring. 4/- per lb.

PREPARED BY

W. HAY, Manufacturing Chemist,

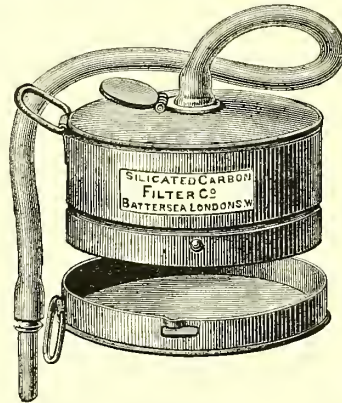
4 REGENT'S TERRACE, ANLABY ROAD, HULL.

NOVELTY. SILICATED CARBON POCKET FILTER,

IN GERMAN SILVER, NICKEL-PLATED.

Retailed at **FIVE SHILLINGS** each.

Designed by
MAJOR FRASER,
of the
ROYAL ENGINEERS,
especially
for Officers' Kits.
Weighs only 8 ounces.



It has been approved
by the
Authorities at the
Horse Guards, and has
been largely
used in the Afghan and
Zulu Expeditions.

No. 20 H.

Sample sent free by Post on receipt of **FOUR SHILLINGS**.

DOMESTIC FILTER, NO. 27.



Made in cream-coloured Stoneware, fitted with the Silicated Carbon Media, complete with Cover and Silver-plated Tap.
All sizes of this pattern can now be had with Patent Ice Compartment, which renders this Filter the most perfect of Refrigerators.

	PRICES.	With Ice Compartment.
No. 0, capacity 1/2 gall.	.. 10s. 6d.	.. —
No. A, " 1 "	.. 14s. 6d.	.. 17s. 6d.
No. B, " 2 "	.. 21s. 0d.	.. 25s. 0d.
No. C, " 4 "	.. 32s. 0d.	.. 36s. 0d.
No. D, " 6 "	.. 42s. 0d.	.. 48s. 0d.
No. E, " 8 "	.. 52s. 0d.	.. 60s. 0d.
No. F, " 12 "	.. 70s. 0d.	.. 80s. 0d.

UNIQUE STONEWARE FILTER, NO. 28.

No House should be considered as thoroughly furnished until it is supplied with one or more good Filters.

No Water should be used for Drinking or Cooking without being Filtered.

This Filter is made of a New Ornamental Stoneware, similar in shape to the Domestic Filter, and of two-gallon capacity. When arranged in a Hall or Conservatory, side by side with evergreens, the effect is very pleasing.

Price, with Silver-plated Tap, 30s.



MAIN SUPPLY FILTER, NO. 40.

SPECIALLY ADAPTED FOR
Mansions, Schools, Hospitals, Public
Institutions, Breweries, Distilleries,
Soda Water Manufactories,
Dye Works,

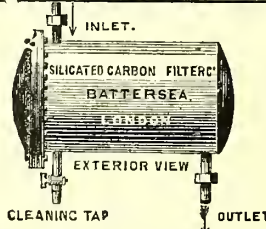
And all other Establishments where large quantities of

PURE WATER

Are required.

The ordinary Sizes kept in Stock are as follows:—

- A, 1/2-inch or 3/4-inch pipe £6 6s.
- B 1-inch pipe £9 9s.
- C, 1 1/2-inch, 1 3/4-inch pipe £15 15s.
- D, 2-inch pipe £26 5s.



This Filter is extremely simple in construction, and can be either connected with a Cistern or attached to the Main Service Pipe. It requires no attention beyond an occasional opening of the Cleansing Tap, and will deliver a supply of purified water at a rate of 50 to 1,000 gallons per hour, according to size.

Special Contracts entered into
for Large Works, Institutions,
&c., &c.,

FOR PURIFYING THE WHOLE OF THE WATER SUPPLY OF A BUILDING BEFORE USE.
Ensuring Rapid and Perfect Filtration, at either High or Low Pressure.

SILICATED CARBON FILTER CO., CHURCH ROAD, BATTERSEA, LONDON.

PARIS: 131 Boulevard Sebastopol.

NEW YORK: 194 William Street (H. R. Mensing, Agent).

HAMBURG: 9 Deichstrasse (Joseph Schmutzer & Co., Agents).

SILICATED CARBON FILTERS.

SYPHON FILTERS FOR TRAVELLERS.

By means of these Filters pure and perfectly wholesome water may be drunk from any pond or stream by simply immersing the Filter therein and drawing the water through the tube by suction.

Each of these portable Filters may be



No. 20.

used as a Syphon by placing it in a vessel of water, then drawing the water by the mouth, and allowing the flexible tube to hang over the side below the Filter. When once set in operation their action is continuous.

They are readily cleaned from sedimentary matter by merely allowing through the tube, and brushing the surface of the filtering medium.

—Pocket Filter, 2½ inches diameter, in porcelain, with glass mouthpiece, in decorated metal box	s. d.
.. .. .	2 6
—Ditto, 3½ inches diameter, in best stoneware	5 0
Ditto, with silver-plated tap	7 0
—Emigrant's, 5 inches diameter, with silver-plated tap	12 0
—Pocket Filter, for carrying over shoulder, as supplied to the Forces in Abyssinia and in Zululand, and to the Ashantee Expedition	3 6
—Ditto, nickel-plated, designed by Major Fraser, R.E., and specially recommended by the Horse Guards for Officers' kits	5 0

TABLE FILTER, NO. 24.

Made of stout glass, in 1, 2, and 3 pint sizes, the filtering medium being securely fitted into the bell-funnel, so that it is not liable to become loose, or to allow unfiltered water



to pass. This Filter is peculiarly suited for the Bedroom and for Table use, affording a ready and simple means of obtaining at any time freshly-purified water.

PRICES.

O, 2s. 6d.; A, 4s.; B, 5s. 6d.
Engraved Vine Pattern—O, 3s. 6d.; A, 5s. 6d.; B, 7s. 6d.

POROUS TERRA COTTA FILTER, NO. 29.

Shape of this Filter as Fig. No. 24.

O, 2s. 6d.; A, 4s.; B, 5s. 6d.

SILICATED CARBON BLOCKS.

2 in., 1s. 6d.; 2½ in., 2s. 6d.; 2¾ in., 3s.; 3½ in., 4s.; 4¾ in., 5s. 6d. ea.
SPECIAL QUOTATIONS FOR QUANTITIES.

PRIZE FILTER,

This Filter is constructed in the form and colour of an Etruscan Vase, having inside it a movable pan, into which the Silicated Carbon filtering medium is fitted.



PATTERN NO. 23.

The exterior is made of Porous Ware, which acts with remarkable power as a Refrigerator, keeping the water deliciously cool. Capacity, about Two Gallons.

PRICE, WITH SILVER-PLATED TAP, £3 10s.

DINING-ROOM FILTER,

No. 22.

MADE IN MARBLED CHINA.

Size A holds about two gallons; size B, five gallons.

PRICES.

A	35s.
B	80s.
A, with Ice Compartment (New Patent)	42s.
B, with Ice Compartment (New Patent)	100s.

The large size (B) is specially adapted for Hotels, Refreshment Rooms, Luncheon Bars, &c.

REFRIGERATOR FILTER, NO. 25.

Made in Porous Terra-Cotta Ware,

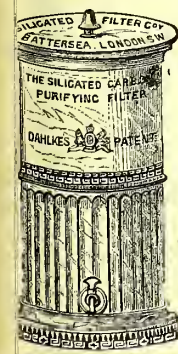
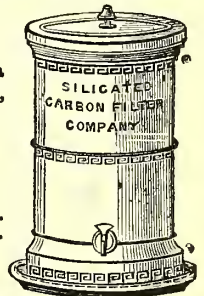
Which acts with remarkable power as a cooler, and renders this Filter invaluable, especially in Tropical Climates,

AFFORDING A

COOL DRAUGHT OF PURE WATER.

Price, with Silver-plated Tap 31s. 6d.
Ditto, ditto, with Ice Compartment 42s. 0d.
Capacity, Two Gallons.

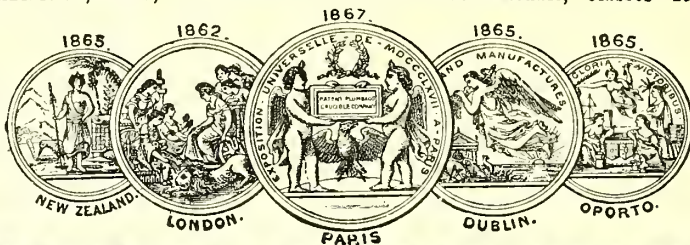
Specially adapted for Tropical Climates.



PORTABLE FILTER, No. 34, for Travellers at Hotels, Families at the Seaside, Pic-nics, &c. Made in Marbled Porcelain, with Cover. Can be placed in a jug, decanter, or other vessel. Price 7s. 6d. each.

SILICATED CARBON FILTER CO., CHURCH ROAD, BATTERSEA, LONDON.

PARIS, 1878. AWARD, THE ONLY GOLD MEDAL FOR PLUMBAGO CRUCIBLES.
 Moscow Exhibition, 1872, Gold Medal, SOLE award. Amsterdam Exhibition, 1869, Highest Award.
 Havre Exhibition, 1868, ONLY First-class Medal (Silver) Awarded.
 Paris Exhibition, 1867, the ONLY First-class Silver Medals, Classes 40 and 51.



THE PATENT PLUMBAGO CRUCIBLE CO.

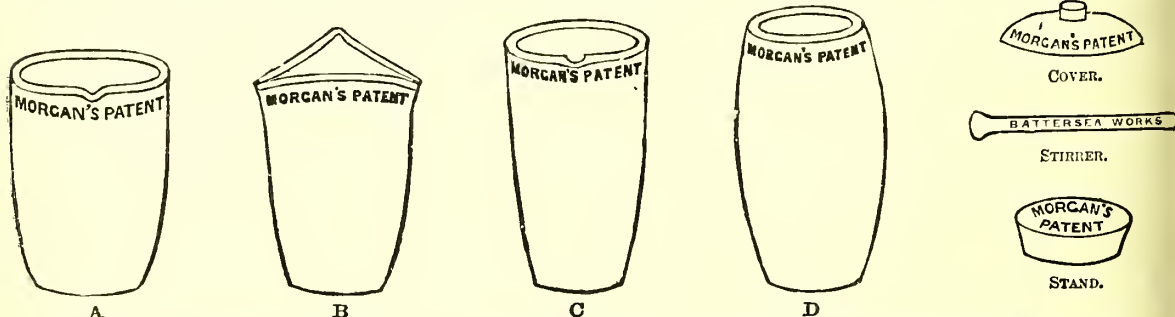
(Sole Manufacturers of MORGAN'S PATENT CRUCIBLES),
BATTERSEA WORKS, LONDON, S.W.

THESE Crucibles (MORGAN'S PATENT) were the only ones to which Prize Medals were awarded in London, 1862; Dublin, 1865; New Zealand, 1865 and Oporto, 1865. They have been in use for many years in the various Government departments of England, France, Germany, &c., and have been adopted by most of the large Founders, Engineers, Railway Companies, and Refiners at Home and Abroad. The capabilities which have now for so many years distinguished

MORGAN'S PATENT CRUCIBLES

are the following:—Their quality is uniform. They withstand the greatest heat without danger. Their average durability for Gold, Silver, Copper, and other ordinary metals, is 40 to 50 pourings; in some cases over 100 have been obtained. They never crack, and heat more rapidly than any other kind. One annealing only required. Change of temperature has no effect. They can, when hot from the furnace, be dipped in cold water with safety. The saving of labour and metal is very great. In *Steel Melting* the Saving of Fuel has been demonstrated to amount to a ton and a half to every ton of Steel fused. For *Zinc* they last longer than iron pots, and save the great loss which arises from mixture with iron. Those for *Malleable Cast Iron* show an average working of several days, doing each day nearly double the work of any other Crucible.

As these Crucibles last longer than others, it follows that the Saving of Metal must be great, because to each worn Crucible a quantity of metal adheres. In fact, comparing Morgan's Patent with other Crucibles, the *Saving of Metal, Time, and Fuel*, alone is more than equivalent to their Cost.



- A.—Made in sizes varying from 2 ozs. to any required capacity, and are marked by the quantity of kilogrammes they will contain—thus: No. 5 will contain 10 lbs. of copper; No. 100, 200 lbs.; No. 200, 400 lbs.; No. 300, 600 lbs.; No. 400, 800 lbs.; No. 500, 1,000 lbs.
- B.—Differ in shape, but correspond in all other respects with A, and are similarly marked.
- C.—Made in sizes varying from 20 lbs. up to 300 lbs. capacity, are marked in English pounds—thus: a Crucible marked 60 will contain 60 lbs.
- D.—Made expressly for melting Steel, in various sizes.

COVERS—Are found of service in many descriptions of melting, the metal being kept free from outside impurities and oxidation.
 STIRRERS—Are used by melters of precious metals for stirring and amalgamating.
 STANDS—Placed under the Crucibles, hasten the operation of melting, and obtain even bearing above bars.

MORGAN'S PATENT CRUCIBLES

CAN BE MADE
 SHAPE REQUIRED, AND



TO ANY SIZE OR
 ARE THUS STAMPED.

REGISTERED TRADE MARK.

CAUTION.—CARE should be exercised that users obtain Morgan's Patent Crucibles.

SOLE MANUFACTURERS:

THE PATENT PLUMBAGO CRUCIBLE COMPANY, BATTERSEA WORKS, LONDON, S.W.

Z O E D O N E

*A Delicious, Sparkling, Phosphated Iron Beverage.—Non-Alcoholic.—
A Brain and Nerve Tonic, and Nutrient Tonic Beverage.*

RECOMMENDED BY THE FACULTY.

From "The British Medical Journal," August 30, 1879.

Among the various medicinal and other exhibits at the recent meeting of the British Medical Association at Cork, to some of which we shall hereafter direct attention, there was one which, to our own judgment, bore away the palm. We refer to the aërated and phosphated iron beverage which Messrs. Evans & Co. of Wrexham manufacture for David Johnson, Esq., F.S., the patentee.

We had ample opportunities of testing its refreshing and invigorating qualities during our sojourn in the fair city of the extreme south-west; and we can confidently recommend it to the attention of physicians and others who are occasionally at a loss what to direct their patients to take when parched by feverish thirst or depressed by exhausting ailments—notably in cases where alcoholic stimulants would be prejudicial. We feel that it would be found exceedingly useful in mitigating the discomfort of miasms experienced by those suffering from the thirst, loss of appetite, and general *malaise* connected with the last stage of phthisis and chronic bronchitis.

We would also, from our observations and experience, advise its introduction into clubs, taverns, and places of public amusement, where it would judiciously supersede vinous and alcoholic stimulants, seeing that it contains, as its name implies, life-giving ingredients in a form easily assimilated.

Every Chemist that has introduced ZOEDONE has found a large and regularly increasing sale for it. It is put up in Champagne Bottles, and there is no trouble with empties, as the bottles are included in the price. Customers supplied with Pamphlets for distribution; also a special Circular for medical men stating the formulæ.

Orders should be anticipated by one week.

Report on the ZOEDONE of Messrs. Richard Evans & Co., of Wrexham.

The Analytical Sanitary Institution, 54 Holborn Viaduct, London, E.C., Sept. 21, 1878.

I have carefully examined the new Aërated Mineral Water manufactured by Messrs. R. Evans & Co., and to which they have given the name of "ZOEDONE." I find the statements made respecting its composition to be fully borne out by the analysis. The "ZOEDONE" is a bright, sparkling, and very pleasant beverage, quite free from medicinal taste; indeed, it forms a most agreeable and elegant vehicle for the administration of the Phosphates of Lime and Iron which it contains, and which are in complete state of solution.

ARTHUR HILL HASSALL, M.D., London,

Author of "Food, its Adulterations, and the Methods of their Detection."

ZOEDONE is supplied direct by us and our Agents on the following Terms, Cash Prices, including bottles and package, free on Rails at Wrexham—6/6 per dozen in half Champagne Bottles (in 6 dozen cases). 12/- per dozen in large Champagne Bottles (in 3 dozen cases). 6d. per dozen extra on small, and 1/- per dozen on large, for export, packed in casks or cases. Trade Terms on application.

WHOLESALE AGENTS:—

- | | | |
|---|---|--|
| LONDON—Messrs. Allen & Hanburys.
Messrs. W. Best & Sons.
Messrs. Corbyn, Stacey & Co.
Messrs. Edwards & Sons.
Messrs. Evans, Lescher & Evans.
Messrs. Heron, Squire & Francis.
Messrs. F. Newbery & Sons.
Messrs. Savory & Moore.
Messrs. Barclay & Sons.
Messrs. S. Maw, Son & Thompson
Messrs. Young & Postans. | BRADFORD—Messrs. Harrison, Parkinson & Co.
BRISTOL—Messrs. Ferris & Co.
CHELTENHAM—Mr. Joseph James.
CORK—Messrs. W. & H. Goulding.
" Mr. T. R. Lester.
COVENTRY—Messrs. Wyleys & Co.
DUBLIN—Messrs. Hamilton, Long & Co.
" Messrs. Johnson & Oldham.
" Messrs. A. & R. Thwaites & Co.
EDINBURGH—Messrs. Duncan, Flockhart & Co.
" Messrs. John Mackay & Co.
GLASGOW—The Glasgow Apothecaries' Co.
HULL—Messrs. Lofthouse & Saltmer.
LANCASTER—Messrs. W. H. Bagnall & Co. | LEEDS—Messrs. Goodall, Backhouse & Co.
LIVERPOOL—Messrs. John Richardson & Co.
" Messrs. Clay, Dod & Case.
" Messrs. Evans, Sons & Co.
" Messrs. Raimes & Co.
" Messrs. R. Sumner & Co.
" Messrs. Clay & Abraham.
" Messrs. Symes & Co.
MANCHESTER—Messrs. James Woolley, Sons & Co.
NEWCASTLE-ON-TYNE—Messrs. Brady & Martin.
NICE—Mr. J. Daniel,
NORTHAMPTON—Mr. Frederick Kirby.
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YORK—Mr. Henry J. Pratt. |
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Lopez..	10/ .. 100		
El Monarca ..	10/ .. 100		
Queen's ..	9/6 .. 200		

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Super Light ..	3/4	Cut Honey Dew Flake..	4/4 .. 5/
Dark ..	3/4	Gold-Leaf Turkey (capital	
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The Planter, Jack's Master, in packets		per lb. 3/6.	

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INDIA RUBBER POROUS STRENGTHENING PLASTERS

are guaranteed not to contain a single atom of Lead or any other ingredient calculated to injure the consumer; on the contrary, **THEIR COMPOSITION IS PURE VEGETABLE**; in quality and general appearance they are unsurpassed by any maker, and can be obtained by the gross at £1 16s., less 10 per cent.

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"Messrs. SEABURY & JOHNSON have produced a list of Plasters, all made with India Rubber as a basis, which are elegant, stick well, are flexible, easily adapting themselves to the folds of the skin, occasion no inconvenience to the patient, and have the appearance of being made with faithfulness to the British Pharmacopœia. One Plaster worthy of especial praise is the Salicylated Isinglass: it is flexible, and on being slightly wetted makes a good adhesive plaster for surgical purposes."

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The "British Medical Journal," "Medical Times and Gazette," "Chemist and Druggist," and many of the Provincial Medical Journals have noticed our productions as worthy of special commendation. Our improved Pharmacopœia and Surgical Plasters in India Rubber combination overcome all objections found in the use of plasters, and present the following advantages and qualities, which will be appreciated by every Physician, Surgeon, and Chemist:—

- Perfect Cleanliness and Reasonable Price.
- Perfect Pliability in any temperature.
- Adhesion without Heat or Moisture.
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Our Mustard Plasters are spread on Cotton Cloth instead of Paper.
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Size, 7 1/4 x 5.	Per doz.	Per gross.	
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" Arnica	4 0	2 4 0	Mustard Plasters (10 in a box), on Cotton Cloth ..Per doz. " 0 10 0
" Aconite	5 0	2 17 0	" (6 in a package) " " " 0 6 0
" Belladonna (B.P.)	4 6	2 11 0	" (3 in a package) " " " 0 3 0
" Capsicum	5 0	2 17 0	" yard Rolls, 6 x 36 " " " 0 10 0
" Opium (B.P.)	7 0	3 16 0	" 1/2 yard Rolls, 6 x 18 " " " 0 6 0
" Poor Man's	4 0	2 4 0	Salicylated Isinglass Plaster, 5-yard Rolls ..Per Roll 0 5 0
" Burgundy Pitch (B.P.) Plasters	4 0	2 4 0	" " " " 1 " " " 0 1 3
" Warming (B.P.)	5 0	2 17 0	India Rubber Porous Strengthening Plasters, in 5 yard Rolls, 5 in. wide ..Per Roll 0 6 3
" Belladonna Plaster (B.P.), 7 in. x 1 yd. ..Per doz.		1 7 6	Ditto ditto in yard Rolls, ditto ditto ..Per doz. 0 17 0
India Rubber Blister Plaster (B.P.), 7 in. x 1 yd. ..Per doz. Rolls		1 7 6	India Rubber Porous Belladonna Plasters, in 5 yard Rolls 5 in. wide ..Per Roll 0 8 6
India Rubber Capsicum Plaster	"	1 7 6	

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ENO'S "FRUIT SALT,"

"FRUIT SALINE," OR "FRUIT POWDER."

ENO V. STEPHENS IN THE COURT OF CHANCERY.

Shorthand Writer's Notes of Vice-Chancellor Bacon's Summing-up and Judgment.

Sir HENRY JACKSON, Q.C., on proceeding to sum up in detail on the evidence and arguments in the case, was stopped by the VICE-CHANCELLOR in the following words:—

Sir Henry Jackson, I do not think I ought to trouble you. The case has been discussed at very great length. I confess somewhat to my astonishment when Mr. Hemming declined to adopt the evidence as it was before the Court of Appeal, and put the Plaintiff to prove by the same evidence the same facts which had been proved before, I was under the impression that he meant to call witnesses on his own behalf. If that had been, as it probably may have been his intention at that time, there would have been a reason perhaps for repeating over again at very great length and considerable expense, of course to somebody, the evidence upon which the Court of Appeal had acted—I say nothing about what was done in this Court, but the Court of Appeal had acted upon that evidence. The case, however, concludes, and no evidence whatever is adduced by the Defendant—not even his own statement in his Defence is verified by his own affidavit. What is to be done with a case like that? The whole principle of the case was decided upon the first occasion. The Court of Appeal thought it right to adopt that restriction which I had thought it right to adopt, not to extend the Injunction further than the then present exigency of the occasion required. Not one word of the judgment of the Court of Appeal shows that there should be any restriction, or that there should be any restriction when the case came on for hearing. Now it comes on for hearing upon precisely the same evidence, and the evidence, among other things, is, that in the circular which accompanies this bottle of Salt, the words to which the Plaintiff particularly objects are repeated by the Defendant, and repeated by means of copying the Plaintiff's circular. Mr. Giffard says nobody buying the bottle would think of looking at the circular, for it is enclosed in the wrapper, and not even visible to the eye. But the case is one in which the Plaintiff complains of the general similarity and the general appearance of the names which are used by the Defendant, and if a purchaser entertained any doubt, if he was puzzled for a moment between "Vinous" or "Vinos," and Eno's—the sounds being, in one mode of pronunciation, very much alike—if he opened the wrapper and read the circular he would say, My doubts are removed; this is what I want—I want Fruit Saline, and here it is—the circular says it is "Fruit Saline."

The Defendant in his statement at the end of the fourth paragraph says he has not "at any time since the month of August, 1877, used the words Fruit Saline, or Fruit Powder, in any label or advertisement or otherwise in connection with the sale of the said preparation." Under the old system if a defendant had put in his answer, as he must, upon oath, he might perhaps have read that passage and said "the Plaintiff's allegation in that respect is denied." The Defence is not put in on oath and the Defendant declines to pledge his oath to that fact. But it does not rest there; for the evidence is clear and conclusive that after the month of August, 1877, when the Plaintiff, not without some degree of forbearance, as it seems to me, was content to take the Defendant's word that he would not repeat that offence which the Plaintiff complained was doing him that injury which he thought he was suffering, he did, in spite of his promise, repeat that which the Plaintiff called an offence and believed to be an injury to him. The case comes to a hearing, the Defendant insists upon the Plaintiff proving his case. At the Defendant's instance the Plaintiff has proved his case, and, among other things, has proved the utter falsehood of that Defence which is set up in the paragraph which I have read. The matter, therefore, is wholly without doubt, without defence, without excuse of any kind that I can perceive, because, when I am told that I must consider what the intention of the parties was, and when I am told, moreover, that there is no evidence that anybody has been deceived, and the Defendant in his defence says nobody has been deceived, his intention to deceive is not contradicted. That is what the Plaintiff imputes to him; and that is what, I think, the Plaintiff establishes not only from the simplicity of the sign, but from the fact that, when the complaint was first made in August, 1877, they were words which the Defendant admitted he had no right to use. For what reason? Because they were calculated to deceive—calculated to represent the Defendant's goods as those which the Plaintiff was selling under the title which he had adopted.

Upon the general case, therefore, in my opinion, the matter is beyond all doubt. It is proved that the use of the word "Fruit" with other substantives, "Saline" and "Salt," and so on, has been made by the Defendant since the time when he promised not to make it, when he admitted it was unlawful, and which I have no doubt whatever was wholly unlawful. It is said that he endeavoured to keep his promise by pasting something over the word "Fruit." Well, if that meant anything it is a plain admission of the justice of the Plaintiff's claim in that respect. But how can I consider that that is keeping his promise? Whether that pasting over was to be effectual or not would depend upon the consistency of the paste or glue, or perhaps the humidity of the atmosphere or any other accident. That there was no intention to perform his promise, I am satisfied of, and that there has been no performance of his promise I think is clear.

Upon the general case, therefore, I think the Plaintiff is entitled not only to the Injunction in the terms of the Interlocutory Order, but upon those more extensive terms which the Plaintiff asks, by his claim, should be applied to the Defendant's infringement of his rights.

Then there is another subject which is so intimately connected with that that I desired to hear them both together, and I am very glad I did, because, as Mr. Giffard has just told me, that is the main question in dispute between the parties. For the Injunction the Defendant does not seem to care much, though he has violated it, in my opinion, plainly; but he says the question is whether there is a title to register this Trade Mark for which the Defendant proposes to apply. Now that depends upon the words of the Act of Parliament which have been used, the more important of which are "so resembling as to be calculated to deceive." That is a question not to be decided by eyesight; I am invited to lay these two views side by side, and, since they are not identical and since there are

great differences in their external appearance, to decide that they are not calculated to deceive. To that word DECEIVE I have no right to criticise or quarrel with; it is used in the Act of Parliament, and if I were to give one sense to it, it is plainly in my judgment calculated by the Defendant meant and intended by him, to deceive any person who is not vigilant enough either in eye or in ear to detect at once the difference between Vinous and Eno's, and the difference between Fruit Salt and any other salt. Eno's title being plainly upon his Trade Mark, Eno's Fruit Salt.

It is not, as I have said, by sight; it is not by the use of a microscope it is by any other means of detecting more or less of resemblance that you can decide a question which the statute contemplates by using the word that I have referred to. But it is whether the Registrar, whose office it is to register, is satisfied before he performs his function by registering that mark, that the applicant's mark does so resemble as to be calculated to deceive. Can any living man doubt that it is not only calculated—that it intended—but that it is also calculated—that it is not only calculated—for the purpose of deceiving—else why does he do it? The world is wide as has been said in the Judgment referred to, and all things in the animal and inanimate world are open to the Defendant to make a device which shall distinguish his goods from those of any other person. But the Plaintiff having appropriated to himself, and enjoyed for years a device in which the principal characteristic consists of a bunch of grapes, with a Latin motto, and the specific description which relates to Eno's Fruit Salt the Defendant proposes to register a design in which the principal device is the stem of a vine with a bunch of grapes and some leaves, and a Latin motto around it, and it is to be called "Vinous Salt." If there was nothing in the case but the contrast of these two things, it might, perhaps, to some persons who trusted only their eyes, be said there was no resemblance between them, a sufficient resemblance; but the Registrar is bound to take the whole case into consideration; he is not to be baffled by any mere similarity or dissimilarity. This is not the way that the Court of Appeal, in the latest case that was before it—the Sheffield case—dealt with the question. The Defendant there had a good right to anybody in the world could have to stamp his own coat of arms, or anything else, upon his commodities. Nobody could dispute it, and nobody, putting the things together, could say they were so much alike as to deceive. Mr. Hemming insisted that the stamping, being made on a hard metal, was likely to be blurred and the persons to be deceived. I have a very clear recollection of that case, and say it would be impossible for a man with eyes, or with one eye, in his head, to mistake the device in that case for the device which the Plaintiff desired there to use.

Mr. HEMMING:—Your Lordship will pardon me, I was only quoting the Master of the Rolls.

The VICE-CHANCELLOR:—I know, and have also clearly in my mind what the Master of the Rolls said and what he did not say in the "Dog and Porridge" case, but in that case. The Master of the Rolls' judgment takes a wide and comprehensive view of the subject. He refers to the statute only for the purpose of verifying and corroborating that view, but what he said was an honest man who wants to make the world ever thinks of taking the view partly or wholly which the other tradesman is employing for the purpose of marking his goods, and that I take to be the true principle of the case.

And, taking all these things together, the Plaintiff's evidence in the first place, the total absence of evidence or statement on the part of the Defendant, excepting the ingenious and elaborate statements which Counsel have addressed to me, there being no statement whatever by him at any time except that he admitted he had done wrong in using the word "Fruit," I am asked to say that there is no such resemblance between these two devices as, between those two men, are calculated to mislead in reference to the commodities tendered in the shape in which they are sent into the world. I think I should be wasting time if I observed further upon it. I do not think it would be only that there is a resemblance to answer the strictest words of the statute, but that there is a resemblance which has been carefully and intentionally calculated to deceive. And as the Defendant will not pledge his oath to a contrary intention I cannot come to a contrary conclusion than that the injunction ought to go in the terms in which the bill prays for it, extending it there beyond the Injunctions granted on the Interlocutory Order and upon the motion to say that the Defendant is not entitled to register the device of a bunch of a vine with a bunch of grapes upon it, and a Latin motto on it and the name "Vinous Salt." There is an end of it therefore.

Sir HENRY JACKSON:—Well, my Lord, of course I must have the costs THE VICE-CHANCELLOR:—You must have the costs of both.

Sir HENRY JACKSON:—And I think I must ask for the Shorthand Notes of the evidence yesterday. That your Lordship has given on occasions. I was impossible for us to avoid incurring a good expense, although it has proved to be absolutely useless. Your Lordship has given it on several occasions, and I must ask your Lordship for the costs of taking the evidence.

Mr. HEMMING:—I do not think your Lordship is ever in the habit of giving costs of that kind, unless there is some special reason for taking the notes. I do not know whether my friend anticipates an appeal upon that evidence, I am sure he will not say so, and I do not think the Court is in the habit of allowing the costs of a shorthand note of the evidence under such circumstances. It is not taken by arrangement between the two sides, and even when there is an arrangement, it is not in every case that the Court allows these costs. I ask your Lordship not to say anything about them unless a general rule is laid down that in every case either party may require a shorthand writer to be employed. We know that the rule is the other way.

The VICE-CHANCELLOR:—So far from laying down any rule, my notion of this particular subject of the costs incurred by the shorthand writer is that it ought not to be done without a good and sufficient reason for it. Now the reason is to me perfectly apparent and conclusive. Sir Henry Jackson proposed to treat the evidence as it had been used in the Court of Appeal, as being put in here. Mr. Hemming objected to that, and insisted upon the witnesses being examined. In my opinion it became indispensably necessary that a record of that evidence should be kept, and that could only be done according to the present practice of this Court by the employment of a shorthand writer. Mr. Hemming therefore drew down upon his own head the necessity for the employment of a shorthand writer, and having done it without reason as I thought; and having done it without effect, I have decided, in my opinion the costs ought to be included in those costs which the Defendant is bound to pay to the Plaintiff.

Mr. HEMMING:—That does not mean any transcript—there has been no transcript taken.

Sir HENRY JACKSON:—I have the transcript here, and I was prepared to sum up this morning.

Mr. HEMMING:—There was no occasion for it.

Sir HENRY JACKSON:—I do not want of course the costs of any of the speeches; I merely take the transcript of the shorthand notes of the evidence.

The VICE-CHANCELLOR:—I think that must be so, because for any thing I know this day week the Lords Justices will have them in their hands.

Mr. HEMMING:—Then would he time to ask for it.

Sir HENRY JACKSON:—My Lord has decided.